

Reports of practice in the clinical wards of the Royal Infirmary of Edinburgh during the months of November and December 1817, and January 1818, and May, June and July, 1818.

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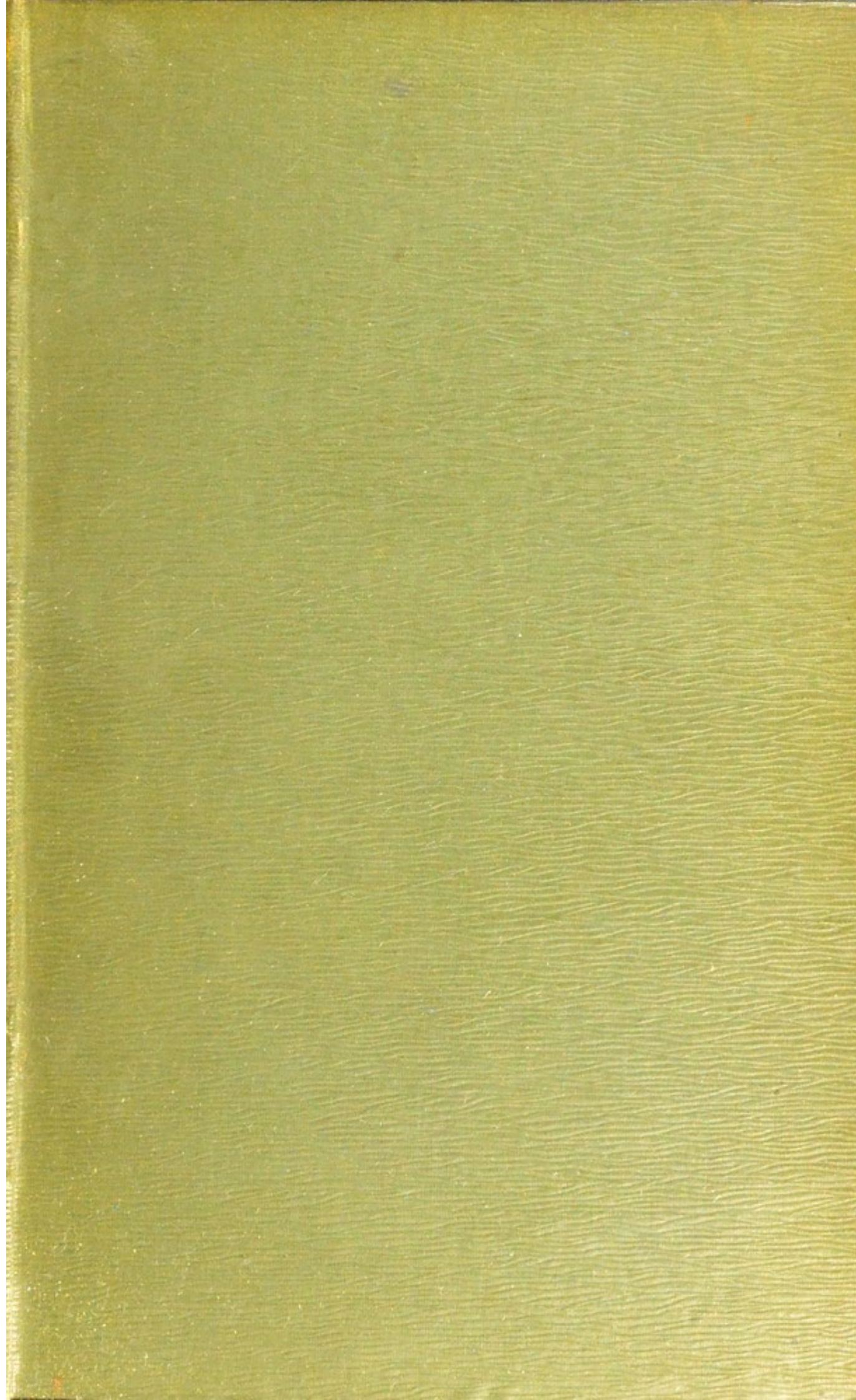
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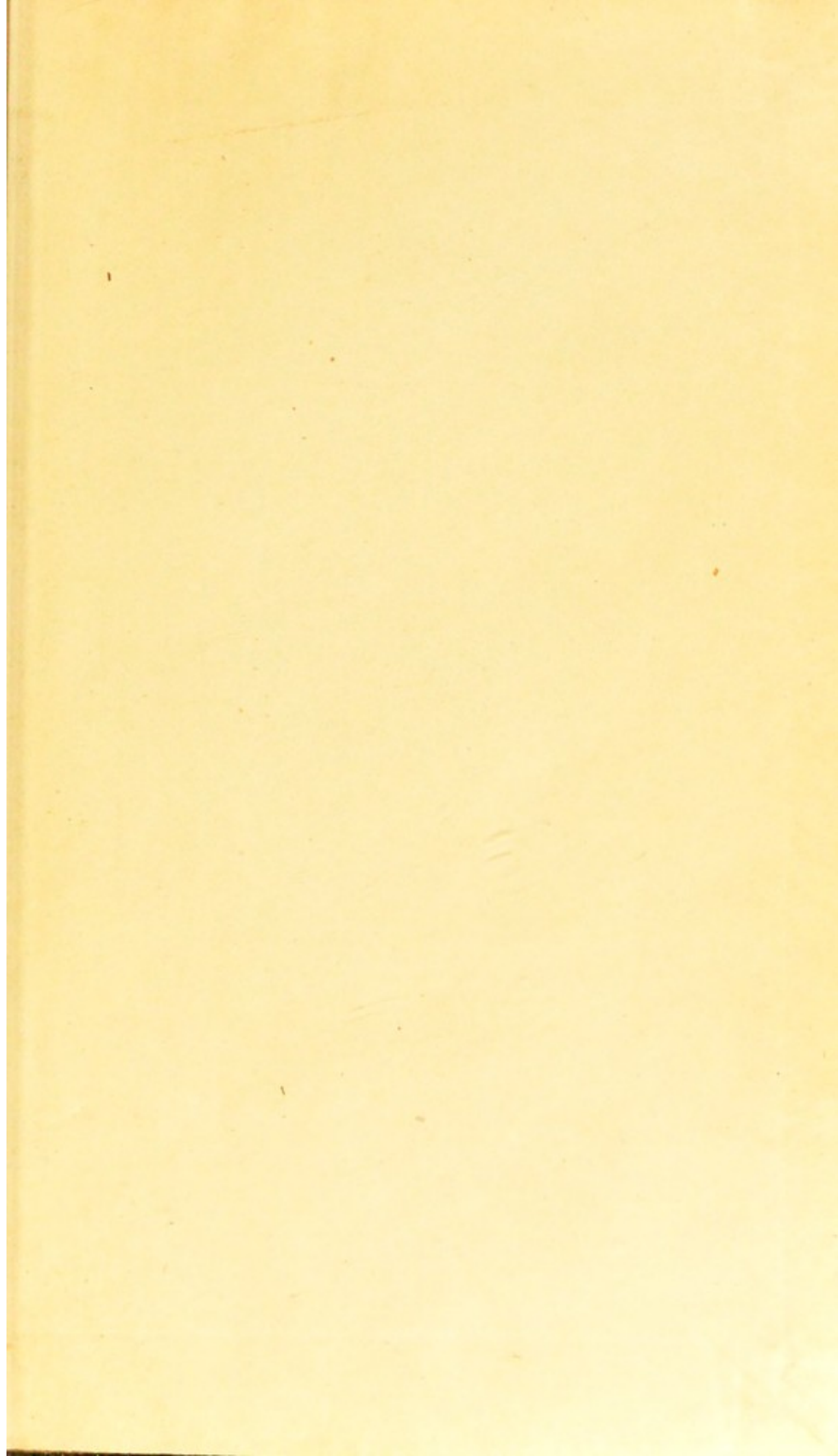
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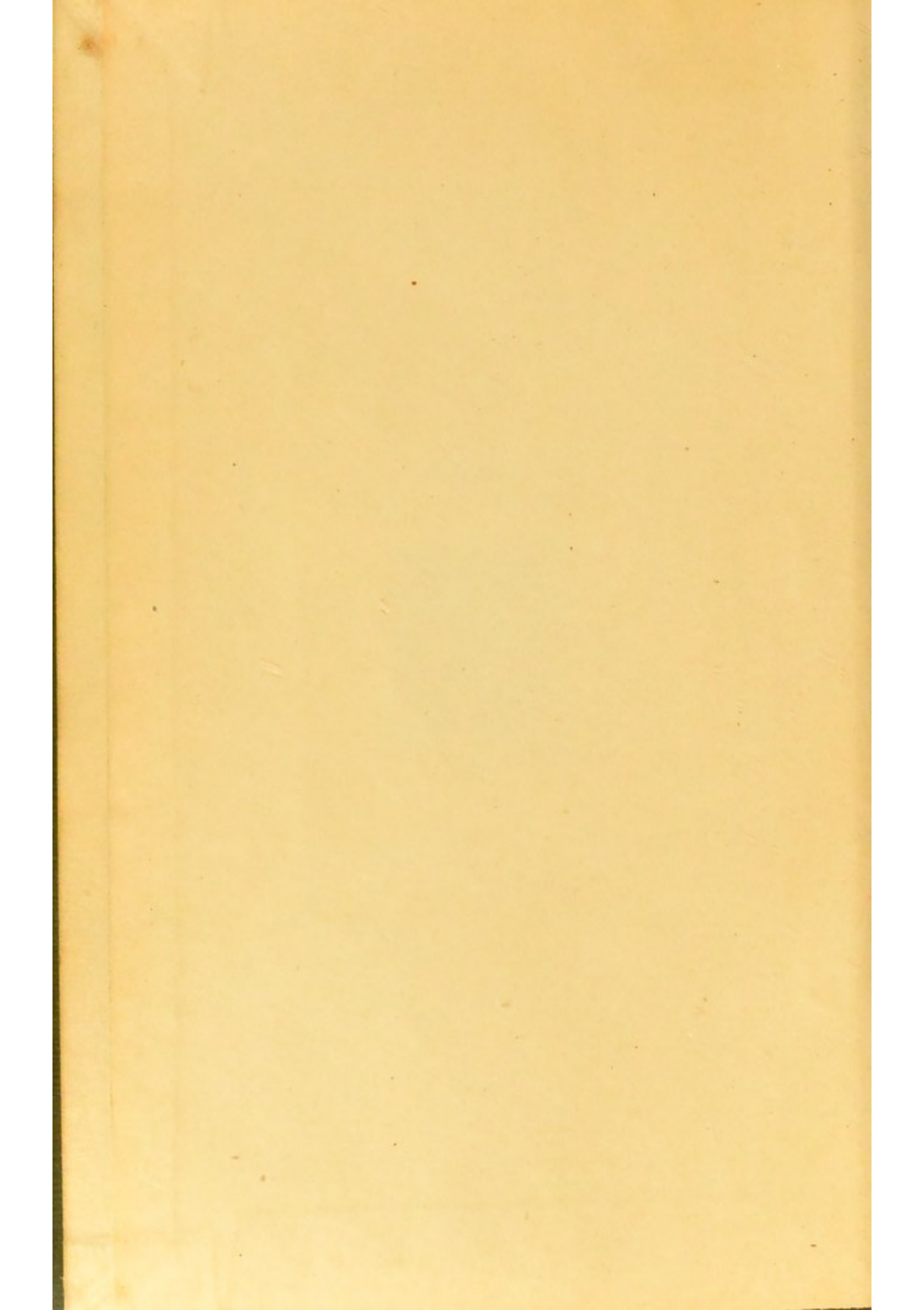


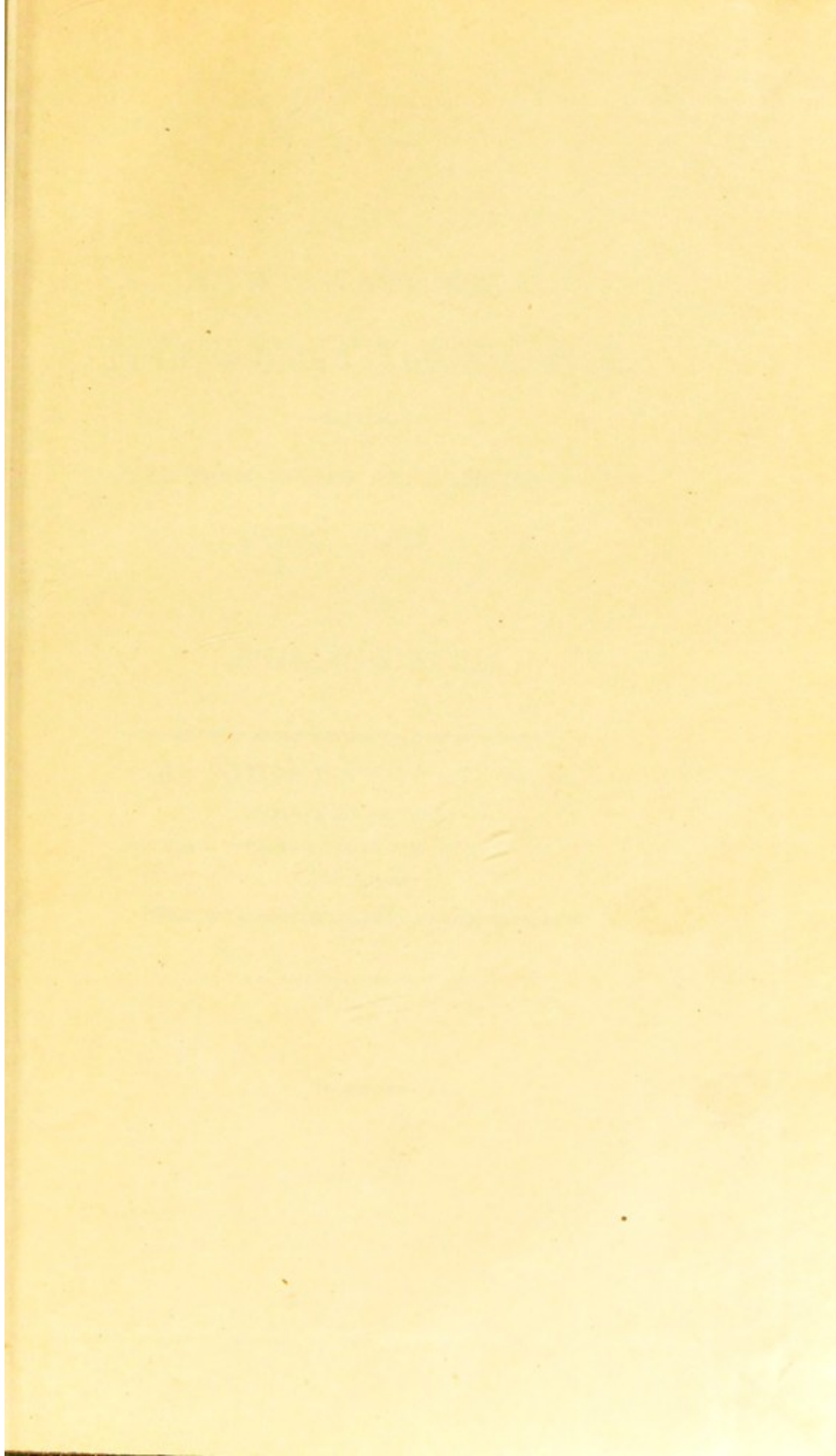
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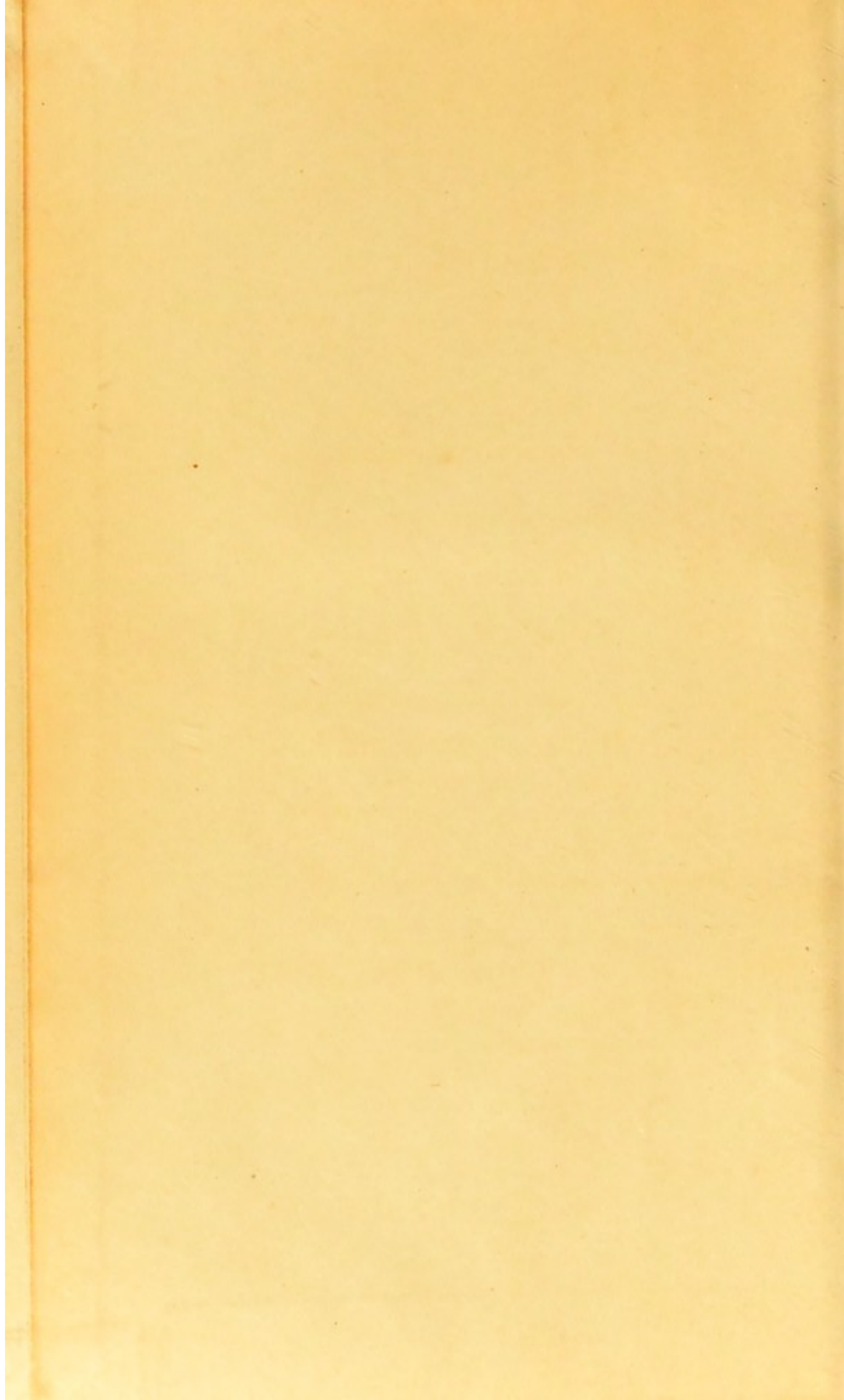


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A
NEW ANATOMICAL
NOMENCLATURE,
RELATING TO
THE TERMS WHICH ARE EXPRESSIVE OF
POSITION AND ASPECT
IN THE
ANIMAL SYSTEM.

By JOHN BARCLAY, M.D.

LECTURER ON ANATOMY, AND
HONORARY MEMBER OF THE ROYAL PHYSICAL SOCIETY,
EDINBURGH.


Ουτε τεχνη, ουτε σοφιν ἐφικτον, εἰ μὴ μάθητις.

ΔΗΜΟΚΡΑΤ. ΦΙΛΟΣΟΦ. ΓΝΩΜ. ΧΡΥΣ.

Edinburgh:

PRINTED FOR ROSS AND BLACKWOOD, SOUTH BRIDGE STREET;
AND T. N. LONGMAN AND O. REES, LONDON.

1803.



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TO
DR THOMAS THOMSON,

LECTURER ON CHEMISTRY, EDINBURGH.

DEAR SIR,

I COULD not hesitate a moment about the Person to whom I should dedicate the following Essay. Our long and intimate friendship, with our frequent conversations upon the advantages that might be derived from a NEW ANATOMICAL NOMENCLATURE, led me unavoidably to think of You. Whether the Public will approve or condemn the attempt I have made, or whether they will even deign to take notice of it, I pretend not to say. But be that as it will, the favourable opinion of a Friend whom I highly respect, of one so generally

generally known as You are, and of one so eminently distinguished for learning, science, and accurate observation, will, I can assure You, ever be a source of inward satisfaction to,

MY DEAR SIR,

Your's very sincerely,

JOHN BARCLAY,

EDINBURGH, }
April 20. 1803. }

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NEW

INTRODUCTION.

THE chemical analysis of the springs, wheels, and pivots of a watch, never can explain its movements, nor its uses; nor the chemical analysis of the bones, muscles, blood-vessels, and nerves, their functions in the animal. Many of the functions depend evidently on mechanical causes, and many more originate in a cause which seems to be neither chemical nor mechanical.

In every living organised structure, there is plainly a power that preserves, regulates, and controls the whole; directing at first the different processes in forming one part of the organs, afterwards employing the assistance of the organs which it has formed to produce more, till at last it completes the whole of the system in such a manner as to suit its future conveniences and wants. In these operations we see it observing determinate proportions,

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magnitudes, forms, numbers, &c.; marking the times, seasons, and circumstances for every change in structure or function; daily continuing to supply the parts in proper time and in due proportion with the vigour of life; and carefully repairing their wastes and their injuries, till the period fixed for their final dissolution. This power, or rather this agent, physiologists have named the *vital principle*; though not a few are inclined to suppose it, to be the effect, rather than the cause, of the organization. They adopt an hypothesis similar to theirs, who, finding a chemist always in his laboratory, are led to imagine that it could not, be he who formed the laboratory, but the laboratory, on the contrary, that formed him. At the same time, we should err egregiously if we ascribed the plan of the system to this vital principle. In constructing the body, it acts, not like the chemist, with any design or foresight of its own; but, in all operations that are performed without either volition or consciousness, appears subordinate to a much higher Power—to that almighty and omniscient Being,

Being, who dispenses his laws to the boundless universe, and whose laws, except by Himself, can never be improved, altered, nor abrogated.

As in every species of living body, the individuals are, bating the usual differences of sex, all constructed in the same way; and the vital principle always confined in its operations to specific forms, structures, and organs, and specific modes of connection and arrangement—it necessarily follows, that there must be as many vital principles, specifically distinct, as there are species of organised structures. The various phenomena in which they agree, and in which they differ, are to be learned in studying their functions, manners, and habits, and in examining and comparing the structures which they produce: For, like to oxygen, hydrogen, and azot, which act so very important a part in the economy of Nature, they are known only from their effects; and however anxious those may be, who can trust only to the evidence of sense, to see, handle, taste, and smell them, they have never yet been detected nor examined in a sepa-

rate state, and probably never will, unless the belief and conviction of mankind, in this respect, appear an object of greater importance to the Author of Nature than they seem to have been hitherto.

With a knowledge of such different causes operating within us, we, in all physiological investigations, should carefully distinguish between what is chemical, mechanical, and vital; and endeavour to ascertain, by due experiment and observation, the part which each acts in the system, and how they usually oppose, assist, and regulate one another for the general good. But to make these experiments and observations, we should likewise know how to examine and accurately describe organised structures. This information we are naturally led to expect from anatomy; while, unfortunately, anatomy has not always in its power to give what we look for. A cursory glance must demonstrate to any one, that these structures are complex and varied; that much depends on position and direction, on relative situation, connection, and aspect; and that no clear or accurate description

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tion can possibly be given, where a language is wanting to express these circumstances. Such a language, it is much to be regretted, is not at present known in anatomy; although the want of it has often been felt, often complained of, and partial attempts frequently made to remedy the evil.

The vague ambiguity of such terms as *superior*, *inferior*, *anterior*, *posterior*, &c. has been felt and acknowledged by every person the least versant in anatomical description. Vicq D'Azyr, who saw the confusion with which they were attended in comparative anatomy, had resolved to reject them as definite characteristic expressions; and perhaps had he seriously thought of their consequences, would have rejected them as occasional adjuncts. But with all respect for so great a man, he saw more clearly to point out the error than to remove it. His terms *occipital*, *syncipital*, and *frontal*, to denote three aspects of the head, are borrowed from bones, none of which are ever confined to a single aspect; and his use of

compounds, in which prepositions, with a sense equivalent to our *under*, *above*, and *before*, enter as parts, was scarcely more than exchanging an old error for a new. His division of the body into numerous regions different from those expressed by *superior*, *inferior*, &c. and with the intention to get quit of these terms, has been equally unsuccessful. The division on which they are founded is natural; and shown, by experience, to be not only convenient and useful, but even necessary. It was not therefore the division that was faulty, but the expression; and D'Azyr, notwithstanding his new arrangement, is often obliged to recur to the old, and make use of the language which he had condemned.

Chauflier, in his Tabular View of the Skeleton, expresses position by a reference to the parts in vicinity or contact. Thus the two extremities of the clavicle are *sternal* and *acromial*; the two of the humerus, *scapular* and *ulnar*; the two of the ulna, *humeral* and *carpal*; the rows of the carpus, *radial* and *metacarpal*; and the two extremities of the metacarpus,

carpus, *carpal* and *digital*. When he comes, however, to the digital phalanxes, and wants the necessary terms of distinction, he is forced to invent for the first, second, and third, or what I would call the *proximal*, *medial*, and *distal* phalanxes, the terms *phalange*, *phalangine*, and *phalangette*. This method of expressing position by a reference to the parts in vicinity or contact, has long been known, though hitherto too sparingly employed. It is attended with peculiar advantages in minute description, and is a part of the general plan which is recommended in the following Essay. But though useful in its place, it must be obvious that it does not supersede the general division into those regions denoted by the words *superior*, *inferior*, &c. We describe not a country by enumerating all those that surround it; we wish to know how each part lies with respect to the east, west, south, and north, and all their subordinate divisions in the compass; and to satisfy the mind, must also be informed of what is its general situation on the globe. Although I be told that one extremity of the clavicle is

sternal and the other *acromial*, I may still wish to know what is the aspect of these two with regard to the trunk, and what are the aspects of its other four sides. More general divisions here become necessary; and Chauffier therefore, as well as D'Azyr, who found the necessity of such divisions, is likewise obliged to have recourse to the old terms *superior*, *inferior*, &c.; or to use compounds of which prepositions equivalent to *before*, *under*, *above*, constitute a part.

In the following Essay I have retained the usual divisions, and ventured only to change their nomenclature: the intelligent reader must decide on the merits of the change proposed. The general views by which I was guided are explained in some preliminary discussions on the nature of language and of nomenclatures, particularly the nomenclature of anatomy. And should what I have done be compared to a building, it may be said that the general plan of the fabric is new, the several apartments more regular and uniform, more convenient, and extensively useful; at the same time that most
of

of the materials, and some subordinate parts of the work, were already prepared, and are only new-modelled and arranged, to suit the design and outline of the structure. The terms indeed which are here suggested are chiefly confined to the expression of position and aspect; but are so contrived as to form an independently distinct nomenclature for general description in all the different branches of anatomy, and may be used while the other names continue as they are. Should they fortunately meet with the approbation of the public, I shall afterwards show their application in detail; and add, on a general and connected plan, the nomenclatures of the BONES, MUSCLES, BLOOD-VESSELS, NERVES, LIGAMENTS, &c.

In the names of the BONES few changes will be introduced: there is no good or rational objection to their usual arrangement into bones of the head, trunk, and extremities; and tho' some of their names might have had originally different meanings, yet as they have long ceased to convey them, and are now entirely appropriated

ted to anatomy, it would answer no reasonable end to run back to the æras of antiquity, and to conjure up ghosts and spectres from oblivion to confound and embarrass them in their present office. The depressions and processes of the different bones may probably require some kind of arrangement, as those of different forms and uses are at present expressed by the same term.

In the names of the MUSCLES it will easily be foreseen that more changes will be found necessary. Some are distinguished by such epithets as *superior*, *inferior*, *anterior*, *posterior*; some by the epithets *oblique* and *straight*; some by the epithet *serratus* or *serrated*; some by epithets descriptive of their form, which, if they be used as arbitrary terms, and have ceased to convey any allusion, are harmless enough; but if they happen to convey an allusion, or refer to characters that are found only in the human body, they naturally become a source of ambiguity, and when limited in sense can seldom be extended to comparative anatomy.

Some

Some names are a kind of descriptions, pretending to explain uses and functions, which those who imposed them did not understand. In all cases these descriptions are extremely imperfect; often are false; and should we credulously receive them as complete, and proceed to reason upon them as data, they must always lead to erroneous conclusions. On this principle some muscles are named pronators and supinators of the radius; some flexors and extensors of the carpus; as if these were the only muscles concerned in performing such movements. Now every anatomist certainly knows, that all the digital flexors and extensors that arise from the humerus or fore-arm, must likewise be flexors and extensors of the carpus; that the sublimis, the radial flexor, and palmaris longus, assist in pronation; that the supinator radii longus brings the arm to the middle position, between pronation and supination, and then acts as a flexor of the fore-arm; that the biceps, attached to the scapula and radius, is an

an extensor of the humerus, a flexor of the radius, and one of the most powerful of its supinators; while other muscles, as the extensor tertii internodii pollicis, although indirectly, occasionally assists it, in that office. From the variety therefore of functions, in which muscles attached to the bones are usually concerned, every name imposed with a view to denote these functions must either be uncommonly long, or extremely imperfect, with regard to description; and if any such be retained in anatomy, it ought to be intimated that the function implied is merely the function that characterises it, and not the only one it performs.

Of all the names that have been hitherto imposed on the muscles, the best are those which are made to distinguish them by their origin and insertion, or the attachments at their opposite extremities. This was certainly demonstrated by Winslow; although the great and accurate Albinus, who had the writings of Winslow before him, seems to have thought otherwise. Most anatomists are pleased with
such

such names as *stylo-glossus*, *stylo-hyoideus*, *stylo-pharyngeus*; and have often regretted that all other muscles were not named and distinguished in a similar manner. It was to comply with this general wish, and their own opinions upon the subject, that Chauffier and Dumas have, each on these principles, given us a new nomenclature for the muscles; although, in the execution of their plan, they perhaps have not fully answered expectations. Unfortunately imagining, that a principle, if right, could not be carried too great a length, they seem to have forgotten the old, though just, observation of the poet, that

Eft modus in rebus; sunt certi denique fines,

Ultra citraque nequit consistere rectum.

Such names are admirably calculated for muscles that have only a simple origin and a simple insertion; but where the origins and insertions are numerous, the name that pretends to enumerate the whole must often run out to the length of a sentence. It will therefore be difficult to reconcile the anatomist to such names

as

as, *Sterno-costo-clavio-humeral*, *Pterigo-syndesmo-staphili-pharyngien*, *Sus-spini-scapulo-trochiterien*, *Sus-optico-sphero-scleroticien*, *Occipiti-dorso-clavi-sus-acromien* *.

As names were intended to mark objects in a general way, with a view to supersede the tediousness of description, to accelerate intercourse, and to make our language keep pace with our ideas; any attempt to reverse the procedure, to check the natural ardour of the mind, to retard its operations, and increase the difficulty of literary intercourse, appears to be rather a retrograde step in the way of improvement. Birth, marriage, funeral, and triumph, are four words each of them denoting a group of circumstances. Now suppose we intended to inform our hearers that we had been witnessing such groups of ceremonies; and that, instead of the general

* Pectoralis Major; the Pterigo pharyngeus, the Syndesmo pharyngeus, the Staphyle pharyngeus, or including all under one name, Constrictor superior; Supraspinatus; the Rectus superior, or Levator oculi; Trapezius.

ral names, we made use of minute and particular descriptions, the day would fail before we could inform them that we had been witnessing a birth, a marriage, a funeral, and a triumph.

Many names in Dumas are liable also to another objection: Besides admitting such words as *intus*, *extus*, *intra*, *extra*, *sus*, and *sous*, he has often founded his names on circumstances that are peculiar to the human species. Muscles of similar situations and functions have not the like origins and insertions in all animals; and if we should always vary the name with the varying circumstances on which it is founded, we should often imagine things to be different which in all essential points are the same.

In many cases a different arrangement would exhibit the origin and insertion of muscles without the assistance of long names. Suppose that one genus of muscles were the muscles attached to the humerus by insertion, it would surely be unnecessary to mention this circumstance in the name of every individual muscle.

muscle. Suppose, again, that these muscles of the humerus were subdivided, according to their origins, into muscles of the *spine*, *sternum*, *clavicle*, and *scapula*, it would be equally unnecessary, after knowing what muscles originate in the scapula and terminate in the humerus, to repeat the information in the name of each muscle. Would it not be sufficient, after knowing where they originate and terminate, to mark them by some individual distinction, which would not require a very long name? nor would it be necessary to mark every individual distinction, but the most obvious and characteristic, leaving all the rest to be noticed in the history and the description. Thus sterno-humeral, or sterno-humeren, could possibly signify no other muscle than the pectoralis major; although this muscle, upon examination, would be found to originate, not only from the sternum, but ribs and clavicle; two origins, which might be omitted at least in the name, as they are common to some other muscles inserted in the humerus, to the deltoid for instance, which
arises

arises from the clavicle, and latissimus dorsi, part of which arises from the ribs.

The muscles have been classed according to their strata, and according to the different regions which they occupy for the purpose of dissection; they have also been classed, by Cowper and others, according to the bones in which they are inserted; while Winslow, to show a more general connection, has, in regular order, enumerated the bones, with their muscular attachments, whether by origin or by insertion. This method, if the muscles which originate and the muscles which terminate in every bone had been separately arranged, would have superseded the necessity of Cowper's, and would itself have been greatly improved, had the remaining attachments of the muscles been exhibited according to their origin and insertion in lateral columns. To illustrate the idea which I mean to convey, suppose that we took the muscles of the humerus by way of example, I would form, in the first place, three distinct columns, as represented in the following Scheme.

B

MUSCLES

The middle column to contain all the muscles belonging to the humerus by insertion or origin: the muscles inserted to be placed first, and the muscles originating to follow next, and their names to be printed in a different character, the more readily to strike the eye.—The column on the left to contain the origins of the muscles inserted, and the other origins which the muscles originating may happen to possess besides the humerus.—The column on the right to contain the terminations of all the muscles that originate in the humerus partially or wholly; and any terminations, should there be such, that they chance to possess in common with the humerus.—In all the columns the connections by origin to be printed in one character, and those by termination to be printed in another; but with this truth always in view, that the origin of a muscle means nothing more than what is in general its most fixed point; and that the part in which it terminates may, by the action of other muscles, be occasionally made the most fixed of the two: thus the scapula, for instance,

by reversing the order, may sometimes be made to move on the humerus, and the humerus on the fore-arm, by the same muscles that made the fore-arm to move on the humerus, and the humerus on the scapula.

A tabular view of this kind would exhibit a very general connection and mutual dependence of various movements, though it would not be sufficient to explain the motions of the animal system. In this Essay I have given some idea of the numerous combinations into which the muscles are capable of entering; although these combinations are not so numerous as the various positions which they produce: For suppose that the fore-arm, during its flexion, should describe, by the points of the fingers extended, the segment of a circle, of which the elbow-joint is the centre, that segment may be divided into more than a hundred thousand parts, easily distinguishable by the naked eye: Now at each of these parts the flexor and extensor, by acting with equal degrees of force, can arrest the motion, and retain the arm in as many
thousand

thousand different positions. From this we may be able to form some idea, though vague and general, of the immense variety of positions which a small number of muscles can produce, that are capable of entering into some millions of different combinations; seeing that two, confined entirely to the simple motion of flexion and extension, on the same plane, can produce so many.

The names which allude to the functions of muscles, and those which distinguish them by origin and insertion, have, from an opinion that they were data, which, with little addition, were sufficient to explain the animal motions, been generally deemed of more importance than they really are. An accurate knowledge of their several attachments is certainly necessary; but as most of the motions are in the diagonal of different forces, and performed by a number of muscles at a time, to understand these motions completely, we should know all the organs concerned, the joints and the ligaments, as well as the muscles; and of

the muscles, not only their names, their origins, and insertions, but their relative strength, position, and direction, and especially how they combine and co-operate; and if we undergo all this trouble, in order to explain the animal motions, we ought surely to know what we are in search of, and be able to say what these motions are. The first thing then to be done is to find out the motions; to class, arrange, and distinguish them by names, from our remarks on the living body, where they are best observed and ascertained. The anatomist and physiologist, in examining the subject, have then to point out, in their demonstrations, how each is produced, and by what organs. The head, to make use of the common language, moves forwards, backwards, to each side, and in all the intermediate directions; I would ask here, How these different motions are performed, and by what muscles? Let us take, for example, the motion forwards; and not to confuse the description with too minute an investigation, let us suppose that the sterno-mastoids alone perform that motion.

motion. The sternal extremities of the clavicles, to which they are attached, must first be fixed by the intercostals and abdominal muscles; and the scapular extremities by the muscles of the scapula, humerus, and the two subclavii. Suppose now that the sterno-mastoids are ready to act, and to bring the head in the diagonal between their forces, What are the muscles employed to prevent the lateral and rotatory motions of the neck? What are the muscles opposed to the action of the sterno-mastoids, and to limit their effects, if it be necessary to fix the position? What are the muscles if we stand erect that balance the body upon thus changing the position of the head? and, What is the manner in which they co-operate in order to produce what is intended? Were we accustomed to put such questions frequently to ourselves with regard to the motions and positions of the system, and to study their answers, we might soon acquire a more perfect knowledge of muscular action than we have at present; be better prepared to treat cases of luxations and fractures;

and to place the parts in easier attitudes after reduction. Our progress, too, would be greatly facilitated by a tabular view of the principal positions and motions of the system, exhibiting under each the several muscles that act as fixors, motors, antagonists, directors; and leaving the manner in which they combine to produce their diagonal or compound motions; the manner in which their levers are lengthened or shortened*; and the manner in which membranes, ligaments, articulations, and cartilages, by their strength, structure, elasticity, or gravity,

* The variation of the centre of motion between two antagonist muscles; the consequent change that necessarily takes place in the relative length of their two levers; the manner in which their mechanical power is thereby either increased or diminished; and the manner in which their contractile power is made to undergo a similar change by the convexity or concavity of the joints over which they pass to the place of their insertion—are all curious subjects of inquiry, and if understood might illustrate many interesting phenomena in the animal œconomy.

vity, conspire to limit, regulate, or antagonise them, to be explained in a separate description.

The celebrated Winslow had a general idea of such a plan, when he divided the motions of the system into those of the head, trunk, &c. and under each enumerated the several muscles concerned, with their attachments. But although he knew, he has not expressed the necessary connection between distant motions in preserving the equilibrium and position; nor has he divided the motions of the parts into different kinds, nor shown how the muscles combine and co-operate in performing each, by producing their effects in various diagonals.

In the VASCULAR SYSTEM comparatively few changes will be necessary, with respect either to names or arrangement. Many of the vessels are well named from their situation, or from the organs on which they are ramified; but improperly distinguished by such epithets as *superior, inferior,*

rior, anterior, posterior, &c. and sometimes not distinguished at all by such epithets as *humeral* and *femoral*, that occasionally are employed to express two very different relations. Thus an artery is humeral when it runs along the course of the humerus, and likewise humeral when it enters the bone to supply it with nourishment.

When they are distinguished by the epithet of the organ on which they are ramified, it often happens when the organ has, or has had, two names, that the name of the artery alludes to the one which is least in use, or to one that is obsolete. Thus the arteries and nerves of the diaphragm are called *phrenic*, containing an allusion to its old name *phren*. The arteries of the stomach are all gastric, and those of the omentum all epiploic, referring to the names *gaster* and *epiploon*. In the same way, a muscle of the tongue, one of the branches of the fifth pair of nerves, and the large artery, are all lingual, from an allusion to its Latin name *lingua*; while its other muscles
and

and nerves are glosſal, from an alluſion to its Greek name *gloſſa*.

To remove this redundancy of language, every organ ſhould have one name, and but one only; and to that name the alluſions contained in the names of its muſcles, nerves, arteries, &c. ought to refer. In determining, however, which of the names ought to be retained, ſome diſcretion will certainly be requiſite. For my own part, I would always prefer that name which, *cæteris paribus*, is likely to be attended with the feweſt changes in the preſent nomenclature. Thus I would prefer *gloſſa* to *lingua*, as moſt of the references there are to the Greek, and expreſſed in compounds of the Greek language, none of whoſe parts would ſo readily unite with the word *lingual* as they do with *gloſſal*, a union to which the eye and the ear have both been accuſtomed: on the other hand, *lingual* enters into no compound uſed in anatomy, and the term *gloſſal* might be ſubſtituted for it, with few changes and no inconvenience.

Another

Another objection to the present nomenclature of the vascular system is, that many of the trunks, considered as wholes, have no names by which they are or can be distinguished; while the several parts of which they are composed are regularly described as distinct vessels. Thus we have gotten a subclavian artery, an axillary artery, and a humeral artery, all parts of the same trunk, which has not itself received any name. We have also a common iliac artery, an external iliac artery, a femoral artery, and a popliteal, all continuations of another trunk, which likewise, as a whole, still remains nameless. This defect is the less excusable, as the nomenclature is already overloaded with a number of names belonging to trifling and irregular branches; as may be seen in Murray's description of the smaller branches of the cœliac, ophthalmic, the subclavian, internal iliac, &c. In these descriptions, it must be confessed, he has imitated Haller; a name whose influence must always be great while anatomy is regarded or studied as a science.

But

But Haller, though possessed of all the learning of the ancients and moderns; though ignorant of nothing belonging to anatomy; though he added many discoveries of his own; was never surpassed, and seldom been equalled, in collecting facts, and describing them minutely—yet was little intent on their general classification and arrangement; and provided he could enumerate all that was known, was little disposed to estimate the difference between regular and irregular appearances, or things of importance and of small value.

In the NERVOUS SYSTEM still fewer changes will be necessary, if we retain their numerical names; and to these names no forcible objection has been made. They express not indeed the origin, termination, or functions of nerves; but they mark out the place of the series in which they pass through the holes or interstices of the different bones; and as that series is clear and distinct, they are easily found out on dissection. A few varieties occur in the
mode

mode of enumeration; but they are trifling, and the inconvenience easily removed. The question here is, Whether or not should we begin to enumerate the cervical, dorsal, lumbar, and sacral pairs, above or below the first of the vertebræ in these regions? Say above or below, and the business is settled; or let every one follow his own method, the inconveniency will not be great. The series, taken as a whole, is regular, and we know where it commences and terminates; the only difference is about the commencement and the termination of these divisions. Dumas, in writing upon this subject, has confounded two things that are perfectly distinct. It is not with the nerves as it was with the muscles, when they were distinguished by numerical names: in that case there was no series or order of succession but what was arbitrary; and every anatomist, unless when occasionally a little assisted by the strata or layers, was left to begin and end the series of his own creation wherever he pleased. After knowing the series in which the primary
trunks

trunks of the nerves succeed one another, no names can be more definite than the numerical, they never fail to direct the anatomist to the very spot where the nerve is to be found; whence he may afterwards trace it to its origin, or follow its branches to their termination.

I agree with this excellent physiologist, that names, founded upon the supposed functions of nerves, would be apt to mislead, and be the means of propagating error rather than science; but hardly can see how the trunks of nerves could be named from their origin and terminations. The specimen he has given in the new name of the olfactory nerve, is no flattering recommendation of his plan. He proposes to distinguish the trunk by the term *striato-narinal*; the division which terminates at the ethmoidal bone by the term *striato-narinal-ethmoidien*; and the part which is ramified on the pituitary membrane by the term *striato-narinal-pituitaire*. This tiresome repetition of the name of the trunk, in the names of all the divisions
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and branches, would not only be exceedingly cumbrous, but unnecessary. In the system of Linnæus, man belongs to the genus *homo*, to the order of *primates*, and the class of *mammalia*; but did it ever enter the mind of that naturalist to suppose that the genus would be better expressed by the term *mammale primas homo*, than by simple *homo* taken by itself. A name is one thing, classification another, and description a third. From not making this necessary distinction, Dumas, in trying to impose names, is constantly labouring at a sort of classification and description; so that his descriptions are often bad names, and his names more frequently worse descriptions.

In the nervous system, if the trunks retain their numerical names, the branches, like those of the vascular system, might be named from position, or from the organs on which they are ramified. To distinguish at least some of the trunks by the name of their origin, and the terminations of their different branches, would fill a page; or suppose that
one

one termination were preferred, and the rest excluded, this new name could not possibly convey any idea of the general distribution and ramification more than the present.

To answer the purposes of the medical practitioner, and sometimes physiologist, the nerves should likewise be classed in a manner different from that which is used by the dissector. The dissector, if he follow a regular method, begins at their origin, and then proceeds to their ramifications, where he often finds a number of branches entering and mixing in the same organ; a number of branches proceeding from trunks, which are placed at a distance with respect to their origin, and which, in regular anatomical description, are not made to follow in the order of succession. On the other hand, the physiologist and medical practitioner, in treating of the functions or diseases of an organ, must begin where the anatomist ended; and in their recollection trace the nerves from their ramifications back to their origin. Suppose the tongue the subject of inquiry, they will try to

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recollect, What are the nerves with which it is supplied? What are the other parts of the system on which these are ramified? What are the other connections which they form? and, What is the result of these connections in health and disease? A tabular view, therefore, of the nerves, beginning at their origin, and exhibiting their branchings and anastomoses; and another, commencing at the different organs, aspects, or regions, and retracing their connections back to their origin—would be highly useful to the medical practitioner, the physiologist, and comparative anatomist. It is true that something of this kind has frequently been done in books of anatomy, but not on the same general plan that is here recommended. The nomenclator, from such tables, might also derive considerable advantage; and would see the danger of classifying objects, and of founding names upon a contracted view of the subject.

In treating of the **LIGAMENTS**, some other
division

division seems to be necessary besides that into ligaments of the hard and ligaments of the soft parts; while a subdivision merely, according to the regions which they occupy, confounds together things that are different, not only in form, but in structure and function; though if an arranged and general view were first given of the different kinds belonging to the bones, muscles, and viscera, a description of each, according to the several regions which they occupy, would then be not only natural but proper. Thus plants and animals, in the system of Linnæus, are first arranged by some common properties; and then the climates, countries, or places which they inhabit, are usually mentioned if they be known.

But in treating of the general connections of the system, the view is imperfect, if we do not likewise consider how far, and in what manner, the skin, the cellular substance and muscles, the nerves, the blood-vessels, and the absorbents, contribute their share in supporting and forming the general union; nor is it only

this species of union, but every connection or relation whatever among the organs, that we ought to study and carefully examine, if we mean to explain the symptoms of disease, and many of the singular phenomena of sympathy.

Connection, or at least a degree of relation, arises from mere situation and attachment; from being concerned in the same motions or the same positions; from being supplied by the same nerves, the same arteries, the same veins, or the same absorbents; from being enveloped in the same membrane; from having somewhat of a similar structure, or similar properties, with regard to external or internal agents; and not unfrequently from being concerned in the same functions. Thus the skin, the internal surface of the lungs, the intestinal canal, and the kidneys, besides performing their peculiar offices, all co-operate in discharging a noxious fluid from the system; and when one of them ceases to perform its share, a greater proportion of the business or labour falls upon the rest, till every one, communicating

ting as it were its distressed situation to the parts connected, and these to the parts connected with them, the alarm becomes general ; all feel and all act as if interested in a common cause ; and all co-operate in resisting the disease, or in their attempts to restore health.

These ideas of extended connection should prevent the nomenclator from imposing names that allude to limited or partial functions ; and should naturally lead to this observation, that can hardly be too often repeated, that we want, not merely terms in anatomy, but general and connected views, a distinct classification and arrangement ; and that the nomenclature ought to be so formed as best to promote and facilitate the attainment of these objects. In our present nomenclature, to give but an instance of this inaccuracy in classification, what a strange variety of organs, differing in form, structure, and uses, is expressed by the words *ventriculus* and *sinus*.

Partial attempts to amend this nomenclature, and with a view to particular objects,

have, instead of improving it, been only the means of loadening it with synonymes that were already by far too numerous. Every intentional change in a language ought to be made with caution and care, and on general principles that regard the whole: these principles should likewise be fully explained to the public, that they may be able to judge of their importance: “for however desirable it might be, says Degerando, to possess a language perfectly methodical, it would be an event exceedingly deplorable if, under every frivolous pretext, we were to be infested with the restless mania of making nomenclatures. If every professor, for instance, in his lectures, or every author in his writings, should, on slight occasions, think himself intitled to introduce a new language of his own creation; from such a mixture of different idioms, the consequence would be, that, instead of having a methodical language, we at last should have no language at all. The diffusion of knowledge, from being accelerated, would be retarded

ed or entirely interrupted ; disputes would originate on every side ; and the literary world soon become a prey to all the confusion of distressful anarchy *."

I am fully sensible, and will readily acknowledge, that no changes in our present nomenclature ought to be made without weighty and important reasons ; and that these changes should never be extended beyond what are its errors and defects. It were to be wished that even the most weighty and important reasons had influence sufficient to remove these : for the same Degerando, who saw that Reason was often vanquished in its contests with Prejudice, proceeds to observe—" That whatever the merits of a language may be, if it once has received the sanction of time and the suffrages of mankind, the philosopher will find it no easy matter to change or improve it. He may, if he choose, demonstrate its faults

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* Des Signes et de l'Art de Penfer considerès dans leur Rapports mutuels. 3d Vol. p. 196.

and its imperfections ; but if he presume to offer to the world the model of another, though more regular and systematic, there is no quarter from which he has not to expect opposition. He will have, in this daring and hardy attempt, to combat at once the prejudices of the vulgar and pretensions of the learned. The former will bring in a phalanx against him ; all those strong and sacred regards that are due to old and established customs ; customs supported by the conduct of thousands who have gone before him, and the tacit approbation of illustrious names who are universally held in esteem and high veneration. The least reflection is sufficient to convince us, that their recollections and their ideas must rest upon names ; and although erroneously, they will almost unavoidably, draw the conclusion, that it is impossible to change the one without likewise changing the other, and throwing the whole into disorder.

“ The learned, on the contrary, will dislike a reform that may appear to confer on its author a sort of dominion over the science. They will
grant,

grant, perhaps, that the language proposed is preferable to that already in use ; but before they adopt it, they will require a demonstrative proof that it is likewise the best possible. We ought not, they will say, to reject a language already established, unless we be assured that the one which is to be substituted for it is liable to no sort of objection ; or that it will in future preclude the necessity of new innovations. If it should happen to proceed on a system, and that system in any respect owe its support to disputed facts or contested opinions, the opposition will be still more violent. Those who find their opinions overlooked, or the decision given against them, will naturally be disposed to reprobate the whole, and watch opportunities to treat it with invectives. Even former habits with the learned themselves, if they yield at all, will yield with reluctance ; for there is evidently in the nature of man a strong predilection for all those means which he has found instrumentally useful in promoting his schemes : and we find the learned, as
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well as the vulgar, attached to the words which they have long been accustomed to use, and very often in proportion to the labour which they have bestowed on their acquisition.

“ Nor are these the only sources of difficulty which a new nomenclature has to overcome, or of disappointments which it has to look for. Be they learned or unlearned, the indifferent will treat it with coldness and neglect; the indecisive will doubt and hesitate, and withhold their opinion till its fate be determined: and although it should answer the purposes intended, the invidious will naturally feel hurt at seeing others attaining their object at a less expence than they did themselves; for in their estimation, science, like a diamond, should derive its value from its rarity, its price, and the difficulty of procuring it; add to this, that the timid and desponding will, without the trouble of making the distinction, express a distrust in all innovations, and the indolent see nothing in such an improvement but the grievous trouble of learning new terms; while the man of
words

words will be indignant at the thoughts of a language whose clearness and precision may check the flow of his loose declamations, or be the means of detecting his ignorance."

From such a concourse of dispositions, interests, and habits, all combining to oppose the introduction of a new nomenclature, Degerando thinks that its own merit will have little influence in recommending it to notice and attention; and therefore imagines that nothing almost but the magical power of a celebrated name; a name inspiring confidence and awe, and whose very sound can silence the passions, gain prejudices over to its side, and lead the judgment as it were in chains, will ever be sufficient to secure to it any thing like a general reception among those of the profession. But though I must confess my high respect for such an authority, I am far, however, from being of opinion that men are so much the dupes of envy, prejudice, and meanness, as this author seems to insinuate.—I know well the numerous difficulties which the great discovery of the circulation had to encounter;

encounter ; and what opposition was for some time made to the doctrine of absorbents. But the difference between these important discoveries and a new nomenclature is immense. These discoveries were not foreseen ; the want of them was not felt nor complained of ; men were satisfied with what they knew of the course of the blood ; and absorption by the veins was an opinion which they considered as almost capable of demonstration.—A new nomenclature is not to be classed with these important and brilliant discoveries. In comparison with them, it ranks low in the registers of Fame. As a work of mere patience and industry, it aspires to no lustre or eclat, it promises no immortality to its author, nor secures to his name any enviable marks of distinction ; it is nothing more than what anatomists have long wished for, a desideratum which they have often attempted to supply by partial amendments ; and if a whole or complete system be still wanting, it is probably because no anatomist of rank or eminence would
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submit to a task where the drudgery was so great and the prospect of reputation so small.—This nomenclature is not to be compared with that of Lavoisier; it establishes no æra in science, it announces no great revolution, nor is formed with a view to perpetuate any illustrious discoveries.—To compare a small thing with a great, it bears a much nearer resemblance to the classification and arrangements of Linnæus; which though they have greatly facilitated the improvement of every branch of natural history, yet imply so little of that enviable character of genius, that those who have improved and enlarged his system, have seemingly thought it no sacrifice of their own reputation to allow their large and numerous additions to pass with the public under his name. But small as that credit may be which is attached to a work of mere labour and industry, the claims of a new anatomical nomenclature cannot be great, even in this view. It cannot pretend to instruct the learned, or to give them new ideas of the animal structure; its influence

fluence extends to what must appear only a speck in the map of science; and yet even there, if it should facilitate the progress of study, and remove only a part of the rubbish that obstructs the journey, the author will consider his object as attained.

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NEW
ANATOMICAL NOMENCLATURE.

PART I.
Relating to the Terms intended to express POSITION and ASPECT in the Animal System.

CHAP. I.
ON LANGUAGE AND ITS KINDS.

THE technical terms of an art or science are what is meant by a nomenclature. The nomenclature peculiar to anatomy forms the subject of the following treatise ; where the merits of that nomenclature are examined, some important changes proposed, and some of the general principles of language previously considered,

dered, with a view to illustrate some of the reasons on which the proposed changes are founded.

In its primary sense, *language* is a word synonymous with *speech*; in a general sense, any species of signs employed as expressions of our thoughts or sensations, in the glowing imagery of poetic figure, it is any phenomena presented by Nature, speaking as it were to intelligent minds, and suggesting ideas which they had not before.

Every language employed by man is one or other of two kinds—it is either *natural* or *artificial*. We call it *natural*, when its signs and meanings are physically connected; when we perceive the force of it by instinct, and understand it without explanation: We call it *artificial*, when its signs and meanings have nothing of this physical relation; when the two are connected by some accidental association, or by some association founded on previous agreement and contract.

Man, if he chose, might have five languages,

ges, corresponding in number to the five senses; although there be few perhaps who have thought of making a language out of smells and tastes.

Smells and tastes indicate several important properties in animal, mineral, and vegetable substances; and more of such properties might, doubtless, be discovered, were the senses to which these signs are addressed more generally or studiously cultivated. But both senses being rather passive in the exercise of their functions, the signs addressed to them are very little under our management; and those impressions which they happen to make on the sentient organs are so various in various persons; so faint, so permanent, or so powerful, that they rather deter than invite curiosity to make the attempt. They are sometimes so violent as even to affect the structure of their organs; and generally raise so strong prepossessions for or against them, that the senses, under the strong influence of association, are forced reluctantly to contract habits by

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which the primary impressions are blunted, and objects made to give pleasure or disgust which formerly excited an opposite feeling. The senses, too, from being contiguous, are in danger of having their impressions confounded, particularly when the objects presented exhibit both an odour and taste. For these reasons, odours and tastes, however susceptible of combination and variety, and however expressive of certain distinctions, have seldom been employed as the vehicles of thought; and the two senses, by which they are perceived, seldom cultivated for any noble or valuable purpose.

The signs of touch, though few in number, and likewise imperfect, have attracted more general attention. At Mecca, and some other places of the East, merchants employ them as a medium of intercourse; thrusting their hands into one another's sleeves, and by means of the fingers conversing together beyond the possibility of being seen or heard. The deaf employ them by laying their hands on the lips
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of their friends, feeling what is meant, and then returning an answer to the touch instead of the eye, when they wish to hold conversation in the dark. The cases, however, are extremely rare where they can be used with any advantage: when those who converse are removed to the distance of a few feet, they become useless; they, besides, are so few, so indistinct, so complex, and so difficultly learned, that mankind, even in the closest intercourse, seldom resort to them, unless when impelled by the strong motives of interest or necessity.

The visible signs have a much stronger claim to our notice; they are of a more elevated nature; are more numerous, distinct, and varied; and, independent of their elegance and beauty, are better calculated to express the modifications of sentiment. They surpass all others in conveying intelligence to a distance; and, owing to the sense by which they are discerned, their entering in groups produces no confusion in perception. The eye, which receives them, marks instantaneously the boundaries of

the whole; assigns to each its relative situation, its colour, its form, and its proportion; performing its office with singular dispatch, and in general with accuracy.

If visible signs be not therefore commonly used as a language, the fault is not in the organs of vision; like those of smell, taste, and of touch, they are not sufficiently subjected to our power; we cannot collect, transport, nor appropriate them at pleasure; we cannot imitate them without much labour and study; and even when the power of imitation is acquired, we cannot separate, combine, and vary the number, the colour, the form, and proportions of their different pictures, readily and with ease.—Gestures, indeed, are natural expressions, but fatiguing and tiresome; depend too much on feeling, on fancy, or the art of mimickry; and would be, even in a Roscius or Garrick, too few in number, and too little susceptible of that variety which is requisite in language.—Another objection to visible signs is, that almost all of them, with the exception of those that
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are luminous, are imperceptible in the dark, and can only be useful during the day, or when artificial light is employed. For these reasons visible signs have been also rejected as a medium of intercourse in the more ordinary occurrences of life ; so that of the five species of signs, the audible only have been received into general use.

As physical causes, audible signs never produce, like odours and tastes, pain, nausea, or vomiting ; and seldom are so loud as to injure the organs to which they are addressed. They are not confined, like the tangible signs, to immediate contact ; and are not, like the visible, dependent on light ; at the same time no signs are more numerous, distinct, and varied, or so much under management. We possess even a system of organs constructed intentionally upon their account ; a system which imitates, creates, combines, separates, lengthens, shortens, raises, lowers, and varies them at pleasure ; a system which, through nervous communications, is made subservient, and in some measure

obedient, to the ear ; and a system, therefore, which is prompt to furnish it, not only with the objects of its perception, but to furnish them likewise of any kind, and in any order, arrangement, or variety that suits its taste. Nay, what is more, the hands and the feet, which under its directions produce sounds in rythmus and measure, would, in cases of necessity, prove no imperfect instruments of its language ; but very seldom has it occasion for their assistance. Its vocal organs are fully adequate for every kind of audible expression ; while the power it has of thus procuring sounds at its pleasure, does not prevent it from deriving much curious information from the sounds emitted by various objects dispersed throughout Nature. By these it is often able to distinguish the species of an animal, its passions, and its feelings ; by these it often distinguishes likewise the mineral and vegetable ; and by attending to their nicer shades and varieties of tone, minute differences, that depend on singular and abstruse properties. We then need not wonder that the
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ear, possessing such superior advantages, should form a language more copious, varied, and extensive, than any addressed to the other senses.

Even WRITTEN LANGUAGE is the language of the ear; none of its signs are directly and immediately the signs of our ideas, but the signs of sounds, to which our ideas are linked and associated. And here, might I venture on a bold figure, I would almost say that written languages are nothing more than the shadows of the vocal; for while vocal languages are in that state which we call *living*, their written languages are observed to follow them step by step; to assume their varying and Proteus forms; and whether stationary, progressive, or retrograde, to undergo corresponding changes. Even the written language of China, which did originally, and does still, in a few cases, answer the purposes of a pictured language, is, upon the whole, more frequently employed as a symbol of speech: for allowing it to possess no fewer than 80,000 different characters, yet that number would be very insufficient to ex-

press all the varieties of historical occurrence, with the circumstances of time, place, and persons; and would still less be fitted to record the transient millions of fleeting generations, as they pass in succession from the cradle to the grave. Let us only consider, Where could each period of time, each lake, river, and mountain, and each individual of the human species, find a distinct and appropriate picture among 80,000, or even 180,000? The truth is, each picture stands for a word; and the same picture, like the same name, may answer a million. Nor need we here have recourse to hypothesis; we are positively assured that these characters have gradually become the symbols of sounds; that occasionally they are used like letters and syllables in spelling words*; that they are made to express rhimes, and are read audibly, just as the written characters of Europe; with this difference, that, retaining something of their ancient privilege as pictured

red

* Vide Theophili Sigefridi Bayeri, *Museum Sinicum*, Petropoli editum, 1730. Vol. I. p. 116.

red characters, many of them, under a different name, continue to indicate the same thing in China and Japan.

Some, in tracing the progress of writing from pictures to letters, and endeavouring anxiously to fill up the gap, have, after labouring, and labouring in vain, supposed, that the last must have been the discovery of Divine Inspiration. This ancient fable of the Egyptians has misled numbers in their researches. If we look at the pictured records of Mexico*, or ask how some of the native Americans write their subscriptions, we shall soon be convinced that most of their pictures represented sounds; that the picture of the flower, the plant, and the animal, stood for its name; and that if a man bore the name of the flower, the plant, or the animal, the picture of the object whose name he bore was made to represent him in writing, but distinguished by some particular mark, to show that it was not to be read literally. If he bore the name of two or three objects, all their pictures

* See Clavigero's History of Mexico.

pictures were joined together, and a word composed as of so many syllables. A similar practice is followed in China ; a great part of their primary words are monosyllabic. All of these syllables have pictures, or rather what were originally pictures ; and when you mean to write a word of so many syllables, you have only to write the pictures of the syllables of which it is composed. Some of these syllables approach near to the elementary founds of our alphabets ; so that words are spelt and written in China by the mutilated fragments of the ancient pictures, nearly as we write and spell them in Europe by means of syllabic characters and letters.

The first step therefore in picture or iconographical writing was to make the figure stand for the name of what it represented ; the second, to select those names which were monosyllabic, and out of their pictures to compose words ; the third, to mark and recollect those names which approached near to elementary founds, and out of their pictures to form syllables.

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All these steps, doubtless, required much time, and a great deal of labour : But nations live for several centuries gradually improving ; and as every nation, in the least civilized, endeavours to preserve written records of some kind or other*, the regular study, the steady perseverance, and united efforts of several thousands for successive generations in the business of state or affairs of commerce, must have done much in improving an art that was capable of improvement ; while lucky accidents occasionally occurring, and the fortunate thoughts of inventive geniuses, must at times have rapidly accelerated its progress until it arrived at something like perfection. Indeed it is almost impossible to conceive how pictured figures, significant of sounds, could have been prevented, in the hands of an ingenious and industrious

* Notwithstanding the tenets of the Druids, and their prohibition with regard to writing, Cæsar informs us, that the Greek letters were in certain cases used by the Gauls of particular provinces.

trious people, from ending gradually in some alphabet, literal or syllabic.

Those who are fond of traditionary stories, who ransack the fabulous records of antiquity to find out the inventors of love, of food, and of clothing, and who have discovered that beasts and birds were among the contrivers of our arts and manufactures, will not be pleased to find that writing should thus have a kind of natural origin. Even speech itself, though the Author of Nature has generously bestowed organs for the purpose, given us a strong inclination to use them, and an ear to listen to the sounds which they utter, would never, in their opinion, have existed unless for some particular revelation; for it does not follow in their way of reasoning, that although a man may chance to have gotten a brain and a stomach, hands and feet, and a number of senses, he therefore should know, without being told, what are their natural and appropriate functions.

If writing, they will say, be a human invention, how comes it that all alphabets seem to be
derived

derived from a common origin? Should not each nation, on that hypothesis, have formed a distinct alphabet for itself? It certainly should, and would actually have done so, had it tried the experiment, and not been anticipated in the discovery by one more enlightened and early civilized. But granting that each had invented an alphabet, and several nations lay claim to the honour, the elementary sounds of their characters would have been very nearly the same; and to an antiquarian or etymologist might appear to have sprung from a common source: for it is very seldom considered that ten or a dozen radically distinct elementary sounds constitute all the syllables of language; that these syllables are necessarily limited to a few hundreds; and, excluding varieties, are found to be the same in every Dictionary of whatever country. The general resemblances arise from causes that are unavoidable; but too often classed with those that are arbitrary, to favour the ideas of learned antiquarians and etymologists in tracing the origin of nations, languages, and customs.

CHAP.

CHAP. II.ON THE CHANGES OF LANGUAGE.

HAVING shown the close and intimate connection between a *spoken* and a *written* language, and mentioned that both are subject to changes, it becomes a sort of necessary precaution, in proposing terms for a nomenclature, to inquire into the causes of such changes, and to prevent as much as possible their operation upon the terms of which we make choice. That such changes are daily, insensibly, and gradually taking place, is a fact too generally acknowledged to require proof; and writers of taste, who value themselves upon the beauty and elegance of their diction, must often reflect, with painful apprehension, on the instability and transient nature of the perishing sounds with which their literary fame is connected. But
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however great their apprehensions may be, the effects which they dread cannot be prevented.

New climes, produce, employments, must necessarily suggest new ideas; of new ideas, the necessary consequence is new words, or the old taken in a new sense; of new words, or a new sense, another consequence is, a new phraseology; in a new phraseology, caprice and fashion, the pride of innovation, the desire of improvement, colloquial inaccuracies, with other causes; such as the varieties which commerce, conquest, and intercourse with foreigners bring in their train—must all affect the stability of language, and vary the action of the vocal organs.

Yet, independent of all these causes, language, besides, has the seeds of change in its very nature; each individual has a voice of his own, and a manner of speaking that distinguishes him from others; and this difference would be still more conspicuous, were it not for the influence of imitation. This imitation, where all are aiming at the same original,

ginal, preserves a sort of general resemblance in the varied language of the individuals of the same nation. But where each has not access to the general standard, and where most are obliged to take copies for their model, the language separates, almost irresistibly, into different dialects; and each province, or each group into which the several inhabitants are classed, acquires a tone, accent, and manner peculiar to itself: or should the province become independent, and all its connection with the nation be dissolved, its dialect hastens to assume the form of a different language. So strong is this tendency to change, that in many provinces of no great extent their dialects are subdivided into dialects; each district, village, and hamlet, secluded from a regular and frequent intercourse, exhibits some peculiarities of speech; and would seemingly in time, if intercourse were stopt, acquire a distinct language of its own.

What can be the cause of all these changes, where nothing appears to induce them from without?

without? If any choose to investigate the matter, he will find it in the number, the varied structure, the diversified functions, and complex movements of the organs employed to produce and articulate the human voice.

It is well known that the more complex any piece of machinery is, whether the work of nature or of art, the more it is exposed to varied action, deviation, and error. Apply this observation to the vocal muscles, and in one sense their number is not great; but if we consider the various combinations of which they are capable, and the varied effects which they produce, their singular powers must appear astonishing to those not acquainted with their compound action. Of this action the ordinary books written on the subject scarcely afford any idea. They seem to imply, that a muscle only acts by itself, in conjunction with its fellow, or against an antagonist: And the young anatomist, after studying for months, and sometimes for years, one of the most curious pieces of mechanism to be found in Nature, and after

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fondly flattering himself that he knows every thing interesting or useful in the animal system, is seldom able to explain satisfactorily a single movement of his own body, or of any of its limbs.

Suppose that A, B are two muscles forming a pair, he is told that A and B perform each a separate movement, and that AB acting together perform a third. This is nearly all that he learns concerning the functions of a muscle and its fellow; but this is a very imperfect idea of the part which they generally act in the system. If another muscle, as C, had been added, the number of movements would have been seven; and a

1	A
2	B
3	Ba
4	C
5	Ca
6	Cb
7	Cab
8	D
9	Da
10	Db
11	Dab
12	Dc
13	Dca
14	Dcb
15	Dcab

fourth muscle, as D, would have raised the number to fifteen. Thus every additional muscle, besides giving a separate movement, may double the number of all the preceding whenever the part to which they are attached is capable

pable of moving in every direction.—Where indeed it is limited to the two motions of flexion and extension, it can vary only the force and the velocity;—but, again, where a number of moveable parts constitutes an organ destined to some particular function, and where this function is varied and modified by every change in the relative situation of the moveable parts, it must be evident that the number of changes producible on the organ must equal at least the number of muscles and all the combinations into which they can enter.

The following TABLE will show the specific and distinct Movements which, independent of Varieties, are producible by any number of Muscles, from 1 to 50.

1	1
2	3
3	7
4	15
5	31
6	63
7	127
8	255
9	511
10	1023
11	2047
12	4095
13	8191
14	16383
15	32767
16	65535
17	131071
18	262143
19	524287
20	1048575
21	2097151
22	4194303
23	8388607
24	16777215
25	33554431

TABLE *continued.*

26	.....	67108863
27	.....	134217727
28	.....	268435455
29	.....	536870911
30	.....	1073741823
31	.....	2147483647
32	.....	4294967295
33	.....	8589934591
34	.....	17179869183
35	.....	34359738367
36	.....	68719476735
37	.....	137438953471
38	.....	274877906943
39	.....	549755813887
40	.....	1099511627775
41	.....	2199023255551
42	.....	4398046511103
43	.....	8796093022207
44	.....	17592186044415
45	.....	35184372088831
46	.....	70368744177663
47	.....	140737488355327
48	.....	281474976710655
49	.....	562949953421311
50	.....	1125899906842623

On these principles, which can hardly be denied, let us here try to form some idea of the number of changes of which the organs of voice are susceptible. The muscles proper to the five cartilages of the larynx, supposing the transverse and oblique arytenoid to constitute but one, are seven pairs*. Now fourteen muscles, that can act separately or in pairs, in combination with the whole, or with any two or more of the rest, are capable of producing 16,383 different movements; not reckoning as changes the various degrees of force and velocity, nor the infinitely varied order of succession by which they may occasionally be brought into action. The number appears almost incredible; but to lessen the surprise, it must be recollected that I speak not here of the powers possessed by any individual,

* Cricothyroideus, Cricoarytenoideus posticus, Cricoarytenoideus lateralis, Thyreoarytenoideus, Arytenoideus obliquus, Arytenoideus transversus, Thyreoepiglottideus, Arytenoepiglottideus.

vidual, which will depend on habits and circumstances, but of the powers of the vocal organs, considered in the abstract, free from all the influence of custom, equally indifferent, and equally disposed to act in any order of succession, in any combination, and with any degree of force and velocity of which their original powers were susceptible.

If the powers I have mentioned appear astonishing, and able to account for many thousands of those varieties observed among the voices of the human species, I have further to add, that the muscles alluded to are only the proper muscles of the larynx, or the muscles restricted in their attachments to its five cartilages. These are but a few of the muscles of voice. In speaking we use a great many more. Fifteen pairs* of different muscles, attached to

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the

* Sternohyoidei, Omohyoidei, Sternothyroidei, Thyrohyoidei, Stylohyoidei, Mylohyoidei, Geniohyoidei, Digastrics, Geniohyoglossi, Stylopharyngei, Palatopharyngei, Cricopharyngei.

the cartilages, or os hyoides, and acting as agents, antagonists, or directors, are constantly employed in preserving the cartilages of the larynx steady, in regulating the place of their situation, or moving them as occasion requires, upwards and downwards, backwards and forwards, and in every way, directly and obliquely, according to the course of the muscular fibres, or in the diagonal between different forces. These muscles, independent of the former, are susceptible of 1,073,741,823 different combinations; and co-operating with the seven pairs of the larynx, of 17,592,186,044,415, exclusive of the changes which must arise from the different degrees of force and velocity, and the infinitely varied order of succession in which they may be brought into action.

But these are not all that co-operate with the larynx, either in forming or changing the voice: the diaphragm, the abdominal muscles, the

Cricopharyngei, Thyropharyngei, Syndesmopharyngei, Mylopharyngei.

the intercostals, and all that directly or indirectly act on the air, or on the parts to which the chondral and hyoidal muscles are attached, contribute their share. The os hyoides could not be raised unless the inferior maxillary bone were previously fixed by the temporals, masseters, and internal pterygoids; and a similar assistance is likewise furnished by several other auxiliary muscles that fix the head, sternum, and scapula; to these we must add some pairs belonging to the pharynx and isthmus faucium, and some also belonging to the tongue; which, combining with others, give to that organ an inconceivable variety of movement; and so quickly that, in rapid utterance, they change its state three thousand times in the space of a minute*.

Yet all these muscles, whether they assist to inspire or expire, to enlarge or diminish the cavity of the pharynx, to shorten, lengthen, to relax

* Haller articulated 1500 letters in a minute, which necessarily required 1500 contractions and as many relaxations of the lingual muscles.

relax or render tense the trachea, to change or fix the situation of the larynx, to alter the relative position of its cartilages, to enlarge or diminish the aperture of the glottis, to give the necessary tension to its ligaments, or articulate the voice as it passes through the mouth — can neither separately, nor in combination, produce an audible impulse on the air without a certain degree of elasticity and vibratory motion of the trachea, laryngeal cartilages, and glottal ligaments. Now this elasticity, though it partly depend on the action of the muscles, yet it partly depends, at the same time, as we learn from catarrh, on the state of the membranes and glandular secretions, and partly, too, as we also learn, from some other cases on the state of the larynx and of the trachea; and suppose these, as well as the muscles, were perfectly fitted to perform their functions, and to produce the audible impulse, yet this impulse is apt to be varied by the state of the nose, fauces, and palate, as we learn from several of their morbid affections. Probably, too, by the size and form of the frontal
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sphenoidal and maxillary antres; and most certainly by the secretion, or rather absorption of the feminal fluid, as we may see in the consequences of castration.

Another source of this species of variety is the ear, which superintends and directs the whole of the vocal system, and without which the voice would be constantly harsh and unharmonious, as may be observed in the speech of the deaf. To the ear we must add the several passions, each of which lays claim to peculiar tones and cadences and to modes of utterance, differing widely in loudness and rapidity, and in many other specific varieties not easily described.

If we turn our attention to the manner in which the voice is articulated, we shall find still more sources of variety; we shall find that, besides the tongue, the pendulous velum of the palate, the palate itself, the alveolar processes, the teeth, and the lips, are all concerned in the pronunciation of words; and if we examine the human lips, compare them with those of inferior animals, observe
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their free and extensive motion, with their numerous muscles*, capable of entering into 524,287 different combinations, we can hardly avoid being of opinion that the human lips, besides being calculated to answer a variety of other purposes, were also intended by the Author of Nature to be organs of speech.

I have no doubt that here the reader's surprise will recur at this immense variety of power in the vocal organs; and more particularly when he reflects that the number of positions which they produce is infinitely greater than that of their movements†. But however great his wonder may be, he will surely recollect that these combinations are not deduced from speculative opinions, but by fair calculation from facts that are acknowledged; and that having no intention whatever to excite any thing

* Levator anguli oris, Levator labii superioris, Depressor labii superioris, Depressor labii inferioris, Depressor anguli oris, Levator labii inferioris, Zygomaticus major, Zygomaticus minor, Buccinator, Orbicularis.

† See Introduction, p. 20, 21.

thing like marvelling astonishment, I have purposely omitted the incalculable varieties that necessarily result from the degrees of force and velocity, and the infinitely varied order of succession in which the muscles may be brought into action. He may assert, and assert with justice, that no individual of the human species can throw his muscles into one thousandth part of the combinations of which I have supposed them susceptible. But he should remember at the same time, that this reasoning, as has been acknowledged, was never intended to show what are the effects of muscles in particular persons, but to show their capacity and original powers; and from what an exhaustless fund of variety in tone and voice they are able to furnish each individual of the countless millions of successive generations with characteristic marks of distinction.

Perhaps even in the single individual the combinations of the vocal muscles are more numerous, and more obvious than is generally believed. Who, from theory, would have ventured

tured to predict, what now is a well authenticated fact, that the deaf, by attention, may learn to speak, and distinguish all the words of a language by their visible changes in the organs of voice? Who that has felt the varied and powerful expressions of the eyes, would have imagined that such a number could have been produced by a few muscles? and, Who has not wondered, and wondered again, at the varied appearances of all the passions, and of all their shades, in the countenance of a Garrick? And yet all these instances must fall short of conveying even the most distant idea of the powers I allude to.

To form any thing like an adequate notion of the singular contrivance of the muscular system, and of the movements of which it is capable, we must not confine our examinations to what is exhibited in two or three particular persons; we must recollect that all the muscles are living powers; that in early life they are apt to contract habits with facility, and afterwards to retain them with such inveteracy as
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to be incapable of any exertion inconsistent with those in which the previous habits had been formed. We see this daily exemplified in the uses of the right and left arm; and may often observe, that those who have long been accustomed to one language find it difficult, and sometimes impossible, to articulate properly the sounds of another. In these cases we see the muscles inactive from disuse, or fettered under the constraints of habit; the habit, too, of particular situations. In such circumstances, it is impossible they can furnish a criterion of what had been their primary powers. To form a just estimate of these, we must look back to the more early periods of life, view them in every diversity of shade, in every person, in every situation, constitution, and climate; we shall then find that whatever these be in the adult, they were very different at the commencement of life's career.

All children acquire the tones, accents, and articulations of those countries in which they are educated; an evident proof that, prior to
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the formation of habits, the vocal muscles may be brought to act in any one of the numerous millions of combinations that have ever been adopted by any tribe, family, or nation of the human race, and be made to acquire the habit of pronouncing with readiness and ease any one of the almost infinite variety of languages that have been, that are, or that ever shall be, on the face of the globe. Even this wonderful diversity of power is daily presented to our observation; for when we consider that the muscular system is, with the exception of a very few trifling varieties, nearly the same in all individuals, having the number, form, structure, situation, direction, and attachment of its muscles in every instance, regular and uniform—we must certainly conclude that, unlike to any thing we have ever seen, it has the power of diversifying its actions in a most extraordinary and uncommon manner; and when we see it exhibit the strongly marked and peculiar differences in the features of the countenance, in the voice, the gait, and the handwriting

writing of each individual in the countless millions of passing generations; when we see it the organ in all their different species of exercise, and every exercise like their tone of voice marked by some discriminating character; in short, when we see the number, variety, the strength, the velocity, and continuance of its motions, in some of the more remarkable cases of running, leaping, dancing, riding, fencing, wrestling, vaulting, tumbling, balancing the body, and performing feats of legerdemain—in the name of wonder, what must we think! We must surely think, with the credulous and vulgar, that it is assisted by the power of magic; or, with the more enlightened and considerate, that it possesses powers and resources, of which, after all our study and inquiry, we are still ignorant.

With respect to characteristic distinctions, I have mentioned several sources of variety in the tone and articulation of voice, besides muscles; but suppose that muscles, acting as motors, fixators, antagonists, or directors, were the only

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source,

source, and that these muscles were 50 in number, although I have enumerated 63, exclusive of others which might have been named, these 50 muscles are capable of entering into 1,125,899,906,842,623 combinations, and the numerous effects of these combinations may be infinitely diversified by the various degrees of force and velocity, and the orders of succession in which they are formed—is it likely, then, that, amidst this countless and almost inconceivable variety, any two individuals should often, or naturally, adopt exactly the same combination, bring their muscles to act in the same order of succession, or employ them with the same force and velocity in uttering sound or articulating words? I should think not. Even that mimicry of the tone and voice, which extends only to the general outlines or prominent characters, is very rare, and would seldom deceive an ordinary ear, if previously warned or allowed time to make the comparison and to discriminate. The muscles of the hand are but few in number; and yet what immense difficulty

difficulty and labour does it cost many to counterfeit the hand-writing of another.

It seems to be owing to the constant operation of such causes, whose influence can neither be checked nor prevented, that no accident ever has occurred, no art ever been discovered, to preserve the stability of vocal language, to calm the forebodings of literary geniuses, and remove the apprehensions that their laboured eloquence in a few centuries must require an interpreter, and the beauties of their diction pass unnoticed without a commentator. In our own country classical standards have been established, their excellency acknowledged, their elegance defined, a variety of expression copiously supplied, dictionaries compiled, senses determined, pronunciation ascertained, but without hopes or a prospect of success. No nation at this day can speak the language of its distant ancestry; and the language of Ossian, were it now extant, we have reason to believe would be as different from the modern Gaelic as the Gaelic from the Welch, or

either of the two from the parent Celtic. The languages of the Bible, Bedas, and Koran, are all dead, though millions were concerned in their preservation, and employed officially to keep them alive*.

* The preternatural interposition of Heaven therefore to divide language into different dialects, does not appear to have ever been necessary; and the passage of Scripture where that fact seems to be asserted, I should rather imagine is misunderstood.

Delighted with the beauty of the plains of Shinar, mankind there, as the Scripture informs us, had projected a scheme of building a capital, and preventing their dispersion. Nor had this thought originated with one; all were equally enamoured of the fancy, and bent on the design; every one was spurring another, saying go to, let us make bricks, let us burn them thoroughly. As the object was popular, and the zeal universal, all of them spoke of it *achadim dabrim, mia phone**, *eisdem verbis*, in the same words; in short, at the time the whole earth, or the men that were in it, had but *sapé achat, cheilos en†, unum os*, or but one voice concerning the matter. And yet as nothing was then so

opposite

* אחרים דברים, μια φωνη.

† שפה אחת, χείλος εν.

opposite to Heaven's intention as their living together; as luxury on the one hand, and oppression on the other; as sedentary labour and debauched lives would all have been the consequence of an opulent city; and as all these events, had they taken place, with their firm resolution not to be dispersed, would have been dangerous in a high degree to a rapid population—the Almighty, in his wisdom, saw it expedient to reprobate their conduct, and frustrate their intentions. With this view he descended from heaven—he threw confusion into all their counsels; in scriptural phrase, he confounded their language; or, using its metaphor, to sow dissension, *peleg lesunim**, he divided their tongues.

* פלג לשונם, Pf. lv. 9. he divided their opinions; for, to speak with the *אחד פה*, or the one mouth, is to be of the same opinion or sentiments, or, as our translators choose to express it, of one accord. See Josh. ix. 2.

CHAP. III.TECHNICAL LANGUAGE SHOULD BE DISTINCT
FROM THE LANGUAGE OF THE PEOPLE.

FROM the preceding observations upon language, the following inferences may naturally be drawn: That the language of science, if meant to be either permanent or general, should be distinct from the language of the country ;—that it should not be entrusted to the management of the ear, whose taste is variable ; nor its fate committed to the organs of voice, which, varied and irregular in their own actions, are at all times under its influence ;—that it should be a language primarily or principally addressed to the eye, which has, not like the ear, the same power of new-modelling and changing its objects ;—and should be a language
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constructed on purpose, or a written language, whose vocal archetype is already dead, and no longer capable of creating disturbance or innovation:—in short, a language as much as possible placed beyond the vortex of fashion and the reach of change; where the strained analogies of simile and metaphor, or other forced and unnatural applications, have little chance of rendering it vague.

Some have imagined that a written language, constructed on purpose, would be preferable to any of our dead languages; but in what respect is not easily demonstrated. In all languages where sciences are treated, it is acknowledged that there are, or ought to be, two kinds of terms, perfectly distinct; one adapted to general use, and the other divided into many species peculiarly appropriated to the purposes of science. The part adapted to general use cannot possibly have a reference to any particular species of science, as every science must have a separate language of its own; nor can it have a reference to the sciences at

large, and therefore must be equally indifferent to all of them. It is true indeed, if a general language, artificially constructed, were generally adopted, and generally understood, it might save the trouble and prevent the errors arising from translation; but not more so than a dead language, generally adopted with a similar view. At the same time, neither one nor the other would compensate for the ease with which we write in our own language; nor for the precision, clearness, and readiness with which we perceive the force of its expression. It is therefore sufficient in every science that its technical terms should be kept distinct from the language which is spoken; that all its terms should have a certain and determinate meaning, should remain unaltered in every translation, and should be the same in every country where the science is either known or cultivated. With respect to the origin of such terms, it will be indifferent whether they be mere upstarts of yesterday, or lineal descendants from the ancient families of

Pagan

Pagan antiquity; only if descended in that way, they must not shine by a borrowed light, they must stand or fall by their own merit; and should they be now in a different capacity from what they were formerly, their original consequence should entirely be forgotten. Every thing in science ought to be real, ingenuous, and open; and every expression that indicates duplicity or equivocation, reservation, wavering, or inconsistency, is a reproach to it.

The Greek and Latin, the two dead languages most generally known, particularly in Europe, furnish most of the terms of our present nomenclatures. The only inconvenience of these terms is that, often being used in a secondary sense, which has a faint or distant analogy to the original, they are very apt to convey double meanings; and thus create a confusion of ideas in those acquainted with their primary import. All, however, are not of this description. Many of them now have the same effect as arbitrary names; and as for the rest,
when

when some time accustomed to their secondary meaning, we gradually forget that they ever had another.

In choosing terms, the taste, doubtless, may be consulted; though on no pretext should it be allowed to direct the judgment, and decide on matters of convenience and utility. In the choice and invention of new words, so far as respects the length and the sound, let it display its whole ingenuity; but where a nomenclature is already established, it ought to give place to a higher authority. In anatomy, for instance, it has no right from either its natural or acquired feelings to determine the questions, What are the terms that ought to be rejected? or, Whether those which we mean to retain ought to be derived all from the Greek, all from the Latin, or partly from both? It is one thing to form a new system of laws for an infant colony, and another to make a general reform in an ancient government.

If the words of only one of the languages were to be retained, we indeed might produce

a sort of uniformity to please the grammarian; but what is that to the anatomist? Will the dictates of reason or of common sense ever induce him to sacrifice his convenience and interest for such an object? and if he did, what idea must be formed of the mind that would leave serious and important studies to amuse itself in gazing at the shadows of antiquated words? for nothing besides the mere shadows of ancient vocables are in general to be expected among the terms of our nomenclatures. They may have something of a learned sound, but they cannot possibly retain much of a classical sense, when applied to objects of which the ancients were entirely ignorant.

The Greek and Latin are both sanctioned in our present nomenclature: to dispossess one of them entirely, would necessarily occasion the introduction of many new terms and the rejection of many old ones. Suppose for a moment that the change has taken place, and the question put, What improvements have we added to science, or what advantages have we acquired

red by it? Why the pleasure, and nothing but the pleasure, of seeing the terms of our nomenclature all derived from the same language. Our taste may be gratified, and we probably may feel something like his satisfaction who, regardless of the other qualities of his servants, is anxious only to have them all from the same country. His favourite object, such as it is, may be one that he would not easily renounce; but can it be the object of a wise man? And when he has got it, is it his reason or his humour that is gratified?

This species of motive, and I know no better for adhering strictly to one of the languages of our present nomenclature, can have little influence on a cool reflecting philosophic mind. He who considers the fluctuating nature of vocal language, will not pay a high deference to words, either on account of the age or the country in which they have flourished; and he who is eager in the pursuits of science, will seldom enquire whether they have come from Athens or Rome: he will cheerfully welcome

come the natives of both, provided that, by their united assistance, he is brought more safely or more expeditiously to the end of his journey. I should therefore be inclined, notwithstanding the opprobrium attached by some to certain connections and intermarriages among harmless vocables, not to reject the co-operation of the two languages in any form, where experience shows it to be convenient, useful, or necessary.

CHAP.

CHAP. IV.THE TECHNICAL LANGUAGE OF ANATOMY,
HOW TO BE IMPROVED.

FROM the above preliminary discussions upon languages in general and nomenclatures, we proceed now to the more immediate subject of the Essay, the NOMENCLATURE OF ANATOMY. In this nomenclature we mean to propose some alterations; but as every alteration is not an improvement, it becomes a fair and reasonable question, What is to be their nature and object, and what advantages are likely to arise from the execution of such a design?

On the coolest and most impartial inquiry, it appears that many of the present terms convey false or erroneous ideas;—that many are superfluous, and of the superfluous many super-numerary;

numerary ;—that many allude to antiquated names, which are but seldom or no longer used ;—that many have a vague indeterminate meaning, and are consequently used in various senses ;—and that several parts have received names, while those wholes of which they are parts have received none. From this view it has been supposed, that were the falsehoods and errors corrected, the superfluities retrenched, the troublesome and unnecessary allusions dropt, the ambiguities removed, and the several deficiencies properly supplied, the nomenclature would not only be improved, but the study of anatomy greatly facilitated.

As confused expression is too often a natural consequence of confused ideas, so ambiguities, in the language of science, may often be traced to the want of a clear and distinct arrangement. And should it afterwards be found that several vague terms in anatomy derive their origin from this source, a new and improved classification, where the circumstances require it, will also, it is thought, be attended with advantage.

It was certainly the clear arrangement of Linnæus, comparatively speaking, that enabled him to give such precision to his language; and that precision has greatly contributed to promote the science, as being a sure and unerring guide to the different objects which it presented; objects which, in consequence of his arrangement, have received a definite and fixed station, where the studious inquirer may readily find it. For this purpose Linnæus arranged them into different groups, which he called classes; subdividing these classes into orders, the orders into genera, and the genera into species; always taking care that those belonging to the same class should have one or more properties in common, those belonging to the same order two or more, those of the same genus three or more, and those of the same species four or more. To each of these groups, which were comparatively few in number, he gave names, annexing a short description of the characters by which they were distinguished. It was by adopting a similar

similar method that Lavoisier improved the science of chemistry; and therefore it is surely an error to suppose that these two celebrated men confined themselves merely to changes upon language. Their merits were of a superior kind. A change of nomenclature, had that been all, would, by introducing a new set of terms, have only retarded the progress of science. Their classification was that which advanced it: it collected the scattered materials together, exhibited the whole in a state of connection, brought them within the sphere of our vision, and placed them at once under the eye in a proper light; while their nomenclatures served as mediums through which they were seen more clearly and distinctly; or rather were a kind of symbolical pictures, representing to the mind the state of the sciences, with the changes or improvements that had been introduced.

From viewing the rapid progress of chemistry that followed immediately on the change of its language, some have been led to consider the two

as cause and effect ; overlooking those important discoveries to which the science was principally indebted for its advancement, and even mistaking the merits of Lavoisier in those labours for which he is celebrated. The genius of this illustrious person was attracted chiefly by the great and the sublime : he felt little pleasure in partial remarks, or in noting minutely the insulated phenomena that take place in the dark corners of a laboratory. As his mind led him to general observations, and to be delighted with extensive views, it embraced in its wide comprehensive grasp a variety of objects, saw at a glance their agreements and discordancies, arranged them in a clear and luminous order, and thence drew conclusions that shot light through every department of chemical science hidden or remote.

From what he had observed, he believed that empyreal or vital air was the cause of acidity in all bodies, and he named it *oxygen* ; he saw that oxygen entered into various compounds with metals, and gave to these compounds

pounds the title of *oxides*. Directing his attention to the acids which it forms, he found them more numerous than had been supposed; distinguished each by a certain change on the name of the substance from which it was obtained; saw many of them widely diffused over Nature, and everywhere entering into various compounds with the several metals, alkalies, and earths—to these compounds he gave no general or common name denoting a class, like the word *oxide*; but according to the acid which they contained, arranged them into sulphats, nitrats, muriats, and so on. In these labours his classification and sublime discoveries were of more real consequence to chemistry than his nomenclature; and yet his nomenclature was not without its merits: It served to communicate the grand ideas which he had formed; and expressed them with a clearness, conciseness, and simplicity, that had not till then been witnessed in the science: it was happy particularly in the names of compounds, as sulphat, carbonat, or muriat of so-

da; denoting at once the nature of the substances of which they were composed: and even went farther, attempting occasionally, as in the words *oxygen* and *hydrogen*, to convey a description in the appellations of simple substances.

The descriptive terms in this nomenclature have been much admired, and many have wished that the like were introduced into some of the other languages of science. With a view to this improvement, many of the present terms of anatomy have been condemned for not expressing some quality or circumstance of the objects which they signify, and others, containing a kind of short definition or description, been substituted for them. As it may be both wished and expected that the new terms brought into anatomy were all of this fort, a previous inquiry into their nature, uses, and peculiar advantages, will not be improper. The French have lately adopted such terms in their modern calendar: The words *nivose*, *pluviose*, and *thermidor*, are intended to show

show the species of weather which prevails at certain periods of the year. Let us see the improvement: The weather being variable even in France, and the rain and snow not happening to fall always at the time foretold in the calendar, these terms become so many lying predictions; and in countries where the seasons and climate are different, are an absurd unintelligible jargon. But what are the descriptive terms in anatomy? Not a great deal better. Many of these, as *sphenoides*, *ethmoides*, *astragalus*, *cuboides*, which are founded on vague and remote analogies, scarcely convey the most distant idea of the forms which they were meant to express;—many which contain allusions to functions, and seem to communicate something of importance, deceive thousands of the indolent and credulous, who trust to their lame and imperfect information;—some, again, as *levator scapulæ* and *supinator radii longus*, are almost unavoidable sources of error, from directly insinuating what is not true;—and some, as it were taking advantage of a partial and

erroneous classification, pretend to inform us of what belongs to this or that function, excluding, by a kind of secret reservation, some of the principal organs employed: this is evident in our distinction and arrangement of muscles into *flexors*, *extensors*, *pronators*, and *supinators*.—But by no means the least numerous class are those which allude to frivolous circumstances; some of which, like *sella turcica*, and the word *hippocampus*, seem intended to illustrate the things which we see, and which we may handle, by comparing them to objects which we either have not seen or have seldom an opportunity of observing. Much discernment, therefore, and caution are highly requisite in the use and application of such terms; for wherever their descriptions are frivolous or vague, or wherever they are false, whether founded on ignorance, error, or hypothesis, they can hardly fail, if used in their primary and original sense, to be hurtful to science: nay, even when true and accurately just, they cannot be admitted unless when concise; for be their descriptive powers what they will,

will, they become ridiculous when they run out to the length of sentences.

Are all such terms, then, to be rejected from the language of anatomy? and ought there to be a complete revolution in its nomenclature? To answer these questions, it may be observed, that no where perhaps is prudence more necessary than in our attempts to innovate on habits and established customs.—Those terms may surely be retained which are just and accurate, and not too long;—those which assist us in discriminating objects;—and those likewise, however absurd their original allusions, that, in course of time, have laid aside their primary sense, and begun to be used as arbitrary names. With respect to the last, the busy genealogist may sometimes be tracing them to what they have been; and should he not find them honourably connected, may endeavour to raise prejudices against them; but few who are deeply interested in science will pay much attention to his surmises. A genius for minute and accurate investigation is highly commendable,

and has frequently led to sublime speculations; but wherever it gets into a wrong path, and allows itself to be occupied with trifles, it becomes contemptible.

The learned philologist indeed may chace
A panting syllable through time and space;
Start it at home, and hunt it in the dark
To Gaul, to Greece, and into Noah's ark * :

But if his object be not of importance,

The solemn trisler, with his boasted skill,
Toils much, and is a solemn trisler still †.

The words *inkhorn*, *posthorn*, *candlestick*, have all been retained in a sense different from the original; but since they have dropt that original meaning, they are found as expressive, and as seldom the causes of mistake, as any other words in the English language. Even in chemistry, the words *oxygen*, *hydrogen*, *azot*, are now used as arbitrary terms, and only with a few suggest an idea of Lavoisier's hypothesis.

Nor

* COWPER'S *Retirement*.

† COWPER'S *Charity*.

Nor is it perhaps difficult to explain how many words, from being descriptive, should thus become arbitrary. Suppose that five different persons saw each a different set of experiments on one of the gases whose name was unknown, and that each should afterwards explain to the rest what he had seen; it would be impossible for them to know that they all were describing but different phenomena of the same gas.

Suppose, again, that during the experiments each had been told that the gas was oxygen, the word *oxygen* would have with each a different meaning; and should it be afterwards pronounced in their presence, would serve as a signal of general rendezvous for all their ideas on the nature of the gas. Upon hearing the word *oxygen* pronounced, each would recal and marshal in his memory his quota of phenomena; every quota would differ from another, but every one of them would belong to oxygen; and they now would perceive, upon each relating what he had seen, that the properties and phenomena of this substance

were

were more numerous than what any of them had previously imagined.

Suppose farther, that all its various properties and phenomena are known to the five, and that each now were desired to mention a few of the most obvious and characteristic, it is probable that each, if any room were left for selection, would mention those which had made the deepest and most lively impression on his own mind; an impression which evidently would depend upon taste, fancy, and judgment, and a variety of other circumstances, not easily enumerated. Allowing, however, the selection to be made, and that each were required to give to the gas a descriptive name alluding to the property which he conceived the most obvious and characteristic, every name would differ from another, all would be limited in their signification, and each pointing out a particular property exclusive of others; none of them would, while in that capacity, serve as a signal of general rendezvous for our ideas on the subject of oxygen.

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A descriptive name is therefore inferior, in certain cases, to an arbitrary name. The former recalls particular ideas, the latter makes no distinction whatever, but summons every idea on the subject; and when they are all collected together, arranged, and examined, presents us with a general view of the whole. From this it appears that the arbitrary name is the symbol of a class, genus, or species, which every one defines or describes according to the notions which he has collected from among the individuals; and that the descriptive is the symbol only of a certain character belonging to this class, genus, or species, which, when it discriminates concisely and accurately, is convenient and useful, but otherwise obtrudes the author's conceit, solicits our attention to some particular fancy or whim, and presumes to recommend it as the guide or the object of our researches.

If oxygen, hydrogen, and azot, exhibit a variety of different characters besides those implied in their names, every man, as well

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as Lavoisier, will feel he has a right to fix on his own marks of distinction, and will naturally prefer his own to another's: so that such words must at last be used in an arbitrary sense, or be laid aside; for no man in a matter of indifference will submit to the tyranny of being unnecessarily restricted in his choice. A descriptive word is somewhat like a picture: Now if a picture be meant for a likeness, it should either exhibit every character of the original, or at least those that are unavoidably obvious to all; for different persons will distinguish an object by different marks and different positions, and those will never discover the resemblance who see not the features by which they were wont to know the original; though others, accustomed to know it by the traits which the painter has copied, may be surprised at their want of penetration, and pronounce the figure an admirable likeness.

Indeed Lavoisier has not extended his descriptive language through the whole nomenclature; he has confined it to those substances

ces that in his time were but newly discovered, and to that part of chemical science where he found it necessary, for the sake of arrangement. Exclusive of a few of the simple substances, he has confined it to the combinations of oxygen with metals, and the combinations of acids with metals, alkalies, and earths. His partiality for these acids, the cause of whose distinguishing property he found to be oxygen, has made him divide the last combinations into sulphats, nitrats, muriats, and so on, as if the acids were so many species or modifications of the different metals, alkalies, and earths. Thus under *calx*, which signifies *lime*, we find the divisions to be sulphats, nitrats, muriats, acetats, &c.; instead of *calx vitriolata*, *nitrata*, *muriata*, *acetata*; the more simple and natural divisions of the ingenious ever memorable Bergman. Yet Lavoisier's method has also its advantages; and at this time of day, where no real inconvenience is felt, any alteration could only proceed from misguided ignorance, or a species of mania for nomenclaturing.

Linnaeus,

Linnaeus, as well as Lavoisier, adopted a new classification; and the clusters or groups into which he has divided natural objects were, so far at least as arrangement is concerned, entirely a work of his own creation. These necessarily required new names; and these names are sometimes descriptive, expressing the characters by which the clusters or groups are distinguished; at the same time he gave new names to the individual objects which had none; fixed upon one particular name where there were many; rejected those which had double meanings; restricted the sense of those which were vague; and in short employed every precaution to avoid whatever in the nature of language tended to mislead, retard, or obstruct the studious mind in the progress of knowledge. Thro' the whole of this tedious and arduous task he was otherwise employed than in the puerile shifting of names with a view to improvement. To change one name for another was rather the business of a translator than a philosopher; and he seems not so much to have aimed at changing

ging the language of science, as at rendering it clear, concise, and accurate, by his lucid and correct mode of arrangement.

If we therefore imitate him and Lavoisier, a new set of terms in the language of anatomy will neither be our sole nor our principal object; we must likewise attend to that kind of classification which is best suited to the nature of the science, and is best calculated to give clearness, precision, and effect, to its nomenclature. Besides, as we often must have recourse to comparative anatomy to illustrate many of the human functions, we ought to contrive many, at least, of the general terms in such a way as to apply equally to man and the lower animals, from whom these illustrations are borrowed.

CHAP.

CHAP. IV.

ON THE TERMS RELATING TO POSITION

AND ASPECT.

HAVING seen how much the essential merits of every nomenclature must depend on the previous arrangement of its objects, it may here be observed, for the sake of order, that the animal systems, for which we principally intend this nomenclature, are composed of a great variety of organs, differing in appearance, structure, and function; that these organs constitute so many subordinate systems, arranged under the various names of Bones, Muscles, Arteries, Veins, Lymphatics, Nerves, Organs of Respiration, Digestion, Generation, Sense, &c.; that subservient to these are different kinds of connecting substances which act as ligaments; different

rent kinds of secreting organs, which are called Glands; different kinds of membranous webs which envelope them; and a common covering of different layers, called the Integuments, which furrounds the whole.

As in a system so complex and varied, an accurate knowledge of situation and position must ever be a matter of the first importance, anatomists have long been in the practice of considering every organ as possessing eight different aspects, which point in as many different directions; *upwards, downwards, backwards, forwards, outwards, inwards, to the right, and to the left*; while the epithets usually employed to distinguish them are *superior, inferior, posterior, anterior, external, internal, right, and left*. Now as one or other of these terms happens to occur in almost every anatomical description, it is proper that they should be weighed and examined before we proceed to the names and arrangements of subordinate systems.

These terms, and most others which have a reference to the different aspects, are in every

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writer borrowed from the common language of the country, where they are used in a vague sense both in their literal and figurative acceptation. From the various directions, situations, and positions to which they are applied, not being accurately classed and defined, they are carelessly transferred, on the slightest analogy, from one to another, with scarcely any sort of discrimination. They may indeed be occasionally defined ; but, in general, what signifies a definition? No definition can easily break the strong association between them and their ideas ; an association which has been gradually forming for years, and which continues to be supported daily by the public sanction. Their ambiguous meaning will be constantly recurring whenever they are uttered ; and while that recurs, or is apt to recur, we may venture to say that they cannot with propriety be retained in anatomy. On this single objection alone they ought to be rejected ; but unfortunately there are others which are less surmountable, and which will appear on a more particular investigation.

SUPERLOK

SUPERIOR AND INFERIOR.

THESE terms, in their primary sense, contain an allusion to the situation of different objects, as they stand with respect to the heavens and the earth; and that they may regularly carry this allusion to the same parts in the language of anatomy, the body is supposed always to remain in the same position. The particular position which anatomists have chosen is the erect; but this position being rather unnatural for the lower animals, we call in the assistance of fancy, and in spite of the senses set them bolt upright on the point of their tail, or their hind legs; or, disregarding the primary sense of superior and inferior, we apply them, without any reference to aspect, to parts that correspond in form, use, or systematic connection.

ANTERIOR AND POSTERIOR,

LIKE the last, suppose the erect position, and denote the parts before and behind. In the lower animals, when allowed to remain in their natural attitude, they signify the parts below and above ; and thus used as a sort of arbitrary terms, express corresponding parts of the system.

EXTERNAL AND INTERNAL

ARE more vague than the preceding. The parts of generation are external or internal with respect to the general surface of the body.

The parts of an organ are external or internal with respect to the surface of the organ itself.

The angles of the eye are external and internal with respect to the lateral parts of the face and the middle superficial line that divides them.

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The parts of the leg are external and internal with respect to its surface, or with respect to the nearness and distance of the line that passes through the axis of the body. Thus all parts of the leg are external if superficial; and all parts likewise external, however deep, if they happen to be situated in what we express by the outer side.

While the arm is in a state of extension, and parallel to the trunk, the side next the trunk is internal; but as the radius rolls on its axis, it becomes a question, which is the side next to the trunk? The thumb, the palm, and the little finger, may in succession all assume that situation. Accordingly those who describe the hand in a state of pronation, make the thumb internal; those who describe it in a state of supination, make the finger external; while Albinus, preferring the middle position, makes the palm internal. Thus each of these words in the upper extremity, adding the sense superficial and deep, have no less than four different meanings; and three of these extended to the bones, muscles,

blood-vessels, and nerves. And as if the confusion were still incomplete, Innes, in describing the interossei, takes one of the senses, where he speaks of their origin ; and another, where he talks of their insertion.

RIGHT AND LEFT

CAN never be applied with any propriety to parts of the extremities. As the right side of the one leg or arm corresponds in form, structure, and functions to what is the left side of the other ; they are therefore applied to the extremities only as wholes, and to parts of the viscera in the great venters, where they sometimes attempt to denote situation with little success, particularly when applied to the cardiac ventricles, sinuses, and auricles.

CHAP. VI.

NEW TERMS RELATING TO POSITION AND
ASPECT.

THE numerous mistakes that daily result from the ambiguity and frequent occurrence of these terms, is surely a reproach to our nomenclature; and few will deny that they ought to be rejected if better ones could be substituted for them. With all submission to the judgment of others, I shall mention some which are certainly more determinate in meaning, and not more difficult in their application; and as the TRUNK and EXTREMITIES seem to require different kinds, I shall begin with those for the trunk.

TERMS FOR THE DIFFERENT ASPECTS OF THE
TRUNK.

ANATOMISTS know that in describing the vertebral column, we call the bone which is nearest to the head the *ATLAS*, and the mass of vertebræ at the opposite extremity the *SACRUM*. In systematic connection these occupy corresponding regions in all animals in which they are found. Instead of the words *Superior* and *Inferior*, I would therefore propose *ATLANTAL* and *SACRAL*.

The breast and the back express likewise corresponding regions in all animals; and therefore, instead of *Anterior* and *Posterior*, we might adopt *STERNAL* and *DORSAL*.

When *External* and *Internal* signify what is superficial and deep, we might, in their place, employ the words *DERMAL* and *CENTRAL*, denoting what points to the skin and what to the centre: or if we happen to be speaking of an organ, *PERIPHERAL* and *CENTRAL*; the term *Peripheral*

pheral being derived from the Greek word that signifies "circumference."

When they signify the side and middle of a surface, suppose a plane, to pass along the middle of the neck, the mediastinum, and linea alba, and to dividing the neck and the trunk into similar halves from the sternum to the dorsum, and let this plane be denominated MESION; LATERAL and MESIAL will in such a case convey the meaning of external and internal; and in many other cases, as we shall afterwards see by examples, be extremely useful in expressing both situation and direction.

The peculiar meanings of *External* and *Internal*, as they are applied to the extremities, will be better referred to their proper place.

As for the lateral parts of the trunk, *Right* and *Left* might still denote these; although, for the reasons already assigned in the general observations, DEXTRAL and SINISTRAL might perhaps be preferable; or should there be no occasion for distinction, as may sometimes happen, the word LATERAL may serve for both.

It

It has already been noticed, that it is chiefly in describing the heart they are apt to convey an ambiguous meaning, and occasion trouble to the anatomist; for what are called the *right* and *left ventricles* are strictly speaking neither right nor left; and those who have chosen to call them rather *anterior* and *posterior* have employed terms equally vague; and more erroneous if they be extended to comparative anatomy. To avoid the inaccuracies which must therefore arise from the use of such language, it should be remarked, that the vascular system in all the nobler species of animals may be divided into two parts, each consisting of veins and arteries. The one for conveying blood from the lungs to the system at large, and the other for conveying it again from the system back to the lungs. Let the vessels which convey it from the lungs to the system be called the **SYSTEMIC**, and those which convey it from the system to the lungs be named the **PULMONIC**, and all ambiguity will be avoided. Thus the pulmonary veins, the left sinus, auricle,

ricle, and ventricle, with the aorta and all its branches, will be *systemic*; while the bronchial veins, the veins of the head, heart, trunk, and extremities, the right sinus, auricle, and ventricle, with the pulmonary artery and all its branches, will be distinguished by the epithet *pulmonic*; and if it be necessary to mark their situation with respect to the trunk, or to one another in this or that species of animal, the terms already used for the trunk, as *atlantal*, *sacral*, *sternal*, *dorsal*, *dermal*, *central*, *dextral*, *sinistral*, *lateral*, and *mesial*, may conveniently be used for that purpose.

Besides removing much ambiguity, another advantage that naturally arises from this change in the nomenclature is, that instead of being obliged to enumerate the vessels in which the purple and in which the vermilion blood is contained, we may say at once that the purple is contained in all the *pulmonic* vessels, and the vermilion in all the *systemic*, whether veins or arteries; that those animals which have but one auricle and ventricle have no vena-pulmonic

nic system, or veins which carry blood to their lungs ; that their pulmonary vessels, in some measure, correspond in function to our bronchials ; and that their blood, undergoing a change from the action of the air, is entirely confined to systemic veins.

TERMS FOR THE ASPECTS OF THE EXTREMITIES.

IN describing the two kinds of extremities, we may naturally distinguish them by epithets borrowed from the regions of the trunk with which they are connected, calling the *Superior*, ATLANTAL, and the *Inferior*, SACRAL extremities.

In mentioning the ends of these extremities, or the ends of the bones of which they are composed, we may, with a reference to the course or direction of the extremity, denominate the end which is nearest to the trunk the PROXIMAL end, and that which is farthest from it the DISTAL. These last terms may be
used

used as common in describing both kinds of extremities, and in distinguishing the ends of the coccyx and its different vertebræ. The other terms must be appropriate if they are to be borrowed from the names of the parts which constitute the two species of organs.

TERMS FOR THE ATLANTAL EXTREMITIES.

IN these extremities we may use the terms RADIAL and ULNAR to signify the two lateral parts, and with little hesitation; as these terms have already been adopted by the accurate Winslow and other anatomists of great eminence.

To the other two sides we may give the epithets ANCONAL and THENAL: The word *anconal* containing an allusion to that projecting point of the elbow which the ancient Athenians and modern anatomists have called *olecranon*; but which other Greeks denominated *ancon*, the name from which we derive the epithet belonging to the muscles called *anconeï*.

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The word *thenal* is taken from *thenar*, the Greek name for the palm of the hand: but here we transfer the word *thenar* to signify the flexure or side of the elbow opposed to the ancon; allowing the word *vola* to remain, and still to signify that part on the thenal side which is called the *palm*.

The aspects therefore of each atlantal extremity, and of all its parts from the scapula downwards, will be PROXIMAL and DISTAL, DERMAL, CENTRAL, ULNAR, and RADIAL, ANCONAL and THENAL; while the scapula, from its close and intimate connection, will have its aspects better expressed by the terms for the trunk.

TERMS FOR THE SACRAL EXTREMITIES.

THOSE parts in the sacral extremities which correspond in their general form, situation, and function, with the ulna, radius, thenar, and ancon of the other extremities, are the *tibia*,
fibula,

fibula, *poples*, and *rotula*; and therefore, if we here preserve the analogy, the eight aspects of the sacral extremities will be PROXIMAL and DISTAL, DERMAL, CENTRAL, TIBIAL, FIBULAR, POPLITEAL and ROTULAR; allowing the word *planta* to remain, as we did *vola*, to express the sole on the popliteal side of the foot; and the large lateral bones of the pelvis to borrow their terms, as does the scapula, from the aspects of the trunk.

That the whole of these terms may be as generally useful as possible, they are meant to extend in their application as far as those for which they are substituted. Thus, for instance, in the ATLANTAL extremity, the humerus, and every bone to the points of the fingers, is supposed to have a *proximal* and *distal*, a *peripheral* and *central*, an *ulnar* and *radial*, a *thoracic* and *anconal* aspect; while the relative situation of every nerve, muscle, and artery, is to be expressed by some one or other of these epithets. To illustrate my meaning by an example, I shall take the interossei muscles, which
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are nothing more than the adductors and abductors of the fingers. Albinus calls those which appear on both sides of the hand the *external*, and those which appear on the palms only, the *internal*. Innes retains the distinction of Albinus with respect to the origin of these muscles; but when he speaks of their insertion, uses the words *external* and *internal* in a different sense to denote the lateral parts of the fingers. If the terms here proposed were adopted, these muscles, with respect to their origins, would be all either *anconal* or *thenal*, and with respect to their insertion *radial* or *ulnar*. Thus I would say, in speaking of their origins, that the two belonging to the forefinger are *thenal*; the two belonging to the middle finger, *anconal*; those belonging to the ring finger and little finger, alternately, *thenal* and *anconal*; the two *thenal* inserted into the *radial*, and the two *anconal* into the *ulnar* sides of these fingers. I have only to add, that the happy effects resulting from the partial use of such definite terms in Murray's Description of the Arteries,

teries,

series, must make every one who is truly and seriously interested in anatomy extremely anxious to see them more generally employed.

THE *objections* started against these terms, if there be any, will, I conceive, be probably somewhat of the following nature:

The words *atlantal*, *sacral*, and *sternal*, allude to parts that are not to be found in those animals which have no vertebræ; and, besides, the allusion is not confined to the part itself, but extended to a sort of imaginary plane that is supposed to be in their vicinity. The answer is, that the parts occupy corresponding regions in all animals in which they are found; show where the planes are to be drawn; and that, instead of multiplying terms, and forming new and distinct nomenclatures for all the distinct classes of animals, it was thought better, where no ambiguity was to be dreaded, to give to the epithets borrowed from these parts a sort of general and arbitrary sense, and transfer them, by analogy, to all the corre-

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sponding regions of the system in every species.

The objection arising to the answer itself, that these terms, taken in a general and arbitrary sense, can no longer allude to the parts from which they are borrowed, is easily removed by causing a change in the termination, to show when they allude to the part, and when to the aspect.

Similar objections may likewise be made to the words *ulnar*, *radial*, *tibial*, *fibular*, *rotular*, and *popliteal*; and a similar answer may also be given: though this may be further said in their favour, that they have been adopted by other anatomists, particularly *Chaussier*; and if their use here be extended, it was to avoid the unnecessary multiplication of terms, and to preserve, as much as possible, simplicity, unity, and conciseness of arrangement, by limiting the number of general aspects to which the subordinate ones are referred.

The meaning of the words *anconal* and *thenal* is likewise different from their primary meaning; but the language from which they
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are borrowed is dead, and the primary meaning will have little chance of being suggested, along with that in which they are employed, to denote two aspects of the arm.

From the rotatory motions of the radius, and its varying positions with regard to the ulna in various cases, it may be difficult, in certain places, to distinguish the aspects when they happen to run in a spiral course; but though this difficulty may often occur, it may always be removed by ascertaining the different aspects at the joint of the elbow, when the radius is placed, or supposed to be placed, in a state of supination. From that point their spiral course may easily be followed in opposite directions both along the humerus and fore arm.

Proximal and *distal* are chosen in preference to *proximate* and *distant*, as being no parts of colloquial language; and likewise for the sake of their termination, as all the other words denoting *position* terminate either in *al* or *ar*.

Central is a word borrowed indeed from colloquial language; but here can occasion no am-

biguity, it being understood in the same latitude with the other terms.

As for the terms *peripheral*, *mesial*, and *dermal*, these, or words of a similar import, were absolutely necessary: but whether or not more agreeable sounds might have been gotten to express their senses, was a subject on which I have not bestowed very much inquiry.

HAVING now seen the defects of the terms denoting *position* in the trunk and extremities, and tried to remedy them, let us next see whether or not there be any defects in their expression when applied to the head. In the human species the word *superior*, in its primary sense, will allude to a part of the frontal bone, and that part of the parietals which lies near the sagittal future. It will likewise allude to similar parts in the sheep and ox, and some other quadrupeds; but were these quadrupeds to assume the erect posture, the parts that are *superior* would be *posterior*: and were man to assume the posture of the quadruped, the parts
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that are *superior* would become *anterior*. *Superior* therefore, in these cases, denotes always, to a certain extent, similar parts, when the attitudes of the two species are different; and dissimilar parts, when they are the same. *Inferior*, on the contrary, similar parts, when the attitudes are the same; and dissimilar parts, when they are different: For, in the natural and ordinary posture of standing or walking, *INFERIOR* alludes to the basis of the cranium in the human species, but to the mouth and lips of these quadrupeds; yet both terms would signify a still greater variety were they farther extended to birds, fishes, reptiles, and insects. *Anterior* and *posterior*, at the same time, if thus extended, would be equally vague; while *external* and *internal* would be almost an endless source of ambiguity. But the force of this reasoning will appear more evident from the following Statement, where the terms are used in their primary sense, and applied to each species in its common attitude of moving or standing.

SUPERIOR.

In man, part of the frontal and parietal bones.

In sheep and oxen, part of the frontal, parietal, and occipital bones.

In dogs and horses, part of the parietal and occipital bones.

In frogs, serpents, and various fishes, all the bones of the cranium and face which compose the plane opposite to the base.

INFERIOR.

In man, the base of the lower maxillary bone, and the bones forming the base of the cranium.

In sheep and oxen, the middle part of the maxillary curves.

In dogs and horses, the same.

In frogs, serpents, and in various fishes, the base of the lower maxillary bone, and the bones

bones forming the base of the cranium.

ANTERIOR.

In man, the eyes, the middle part of the maxillary curves, and the bones of the face, opposed to the rising part of the occiput.

In oxen and sheep, the bones of the face, opposed to the base of the cranium and head.

In dogs and horses, the same.

In frogs, serpents, and in various fishes, the middle part of the maxillary curves.

POSTERIOR.

In man, part of the parietal and occipital bones.

In sheep, oxen, and most quadrupeds, excluding the amphibia, the base of the cranium.

In frogs, serpents, and in various fishes, the occiput.

EXTERNAL AND INTERNAL

Are as faulty when applied in some of their senses to the regions of the head as they are in other parts of the system. What meaning, for instance, can we affix to the *external* and *internal* angle of the eye where the eye is round, where it is lateral, where it is vertical, or where the line passing from one angle to the other runs not transversely, but longitudinally with respect to the head?

FROM this statement it must be evident that the present terms for denoting *situation* will be attended with as much confusion in describing the head as any other part of the system; and that other terms ought to be employed, if we either wish to avoid ambiguity, or make use of general and precise language. At the same time, it will readily be granted, that if the terms already proposed for the trunk or extremities could, with any propriety, be extended to

to the head, new terms would not only be unnecessary, but absurdly superfluous. But while anxious to avoid an improper multiplication of terms, we must recollect that two or three words, having each a definite and precise meaning, are not so troublesome and dangerous in science as one word with two or three meanings that are different; for every word employed to express two or three objects specifically different, must necessarily introduce a sort of confusion into our ideas; tend to mislead us in the paths of inquiry; and unless we are guarded, conduct us at last into the regions of ignorance and error. Forewarned, therefore, of the evils which arise from such redundancies in sense or expression, let us inquire whether any of the terms already suggested can be extended to the parts of the head. In doing this, it is needless to observe that those containing particular allusions to parts of the extremities must be ill adapted to express those of the cranium and face; and that, if we consider the position of the head in different animals,

mals, we must instantly perceive that *sternal*, *dorsal*, *atlantal*, and *sacral*, can do no more than mark the relative situation of parts, or the different positions of the head and trunk with respect to one another. But as even this may be an object of some importance; as it may introduce into our descriptions a greater degree of clearness and precision; and lead to conclusions in physiology that may be both interesting and useful—I shall here show the manner in which the application of such terms may be extended; and shall take first, in the way of illustration,

ATLANTAL AND SACRAL.

IN applying these terms to the head, let us call the line which follows the direction of the vertebral column from the sacrum to the atlas the VERTEBRAL LINE; and suppose it continued perpendicular to the plane of the foramen magnum till it fall on some bone of the cranium

OR

or face. Let this bone, whatever it be, in that case be called the *atlantal*; we shall find, on inquiry, that the parietal bones will be *atlantal* in one species, the *frontal* in another, and some different bone in a third; that the angle formed between this bone and the vertebral line will vary considerably in different animals; and that when the line happens to fall on the same bone, it will often fall on a different part in a different species. In man, for instance, it will fall on the sagittal, a little behind the coronal suture; in all other animals it will fall more towards the face. In the ape, it will fall on the frontal bone, a little before the coronal suture; in the dog and horse, as far down as the orbital ridge; in the mole, the rat, and some other quadrupeds, it will strike on some part of the nose; in frogs and serpents, will descend as low as the maxillary curves; and in some animals may pass obliquely from above downwards through the basis of the head.

If the term *facral* be applied to the head, it must always denote that side which is opposed
to

to the *atlantal*, and may easily be found from observing the place of the foramen magnum, which in all cases must be necessarily *sacral*. The situation of the sacral side will therefore vary with the foramen, which in human skulls is found in the base; but as we descend thro' quadrupeds and birds, proceeds backwards, till in serpents and fishes we find it at that part of the head which is opposite to the mouth or middle part of the maxillary curves. In short, it recedes more and more backwards, towards the one extremity of the head, as the vertebral line comes more and more forwards towards the other. From this fixed and mutual relation we may, from knowing the atlantal point, ascertain in some measure the situation of the foramen; obtain some idea of the form of the head, of its relative position with regard to the trunk, of the most usual posture of the animal in motion; and a variety of other circumstances that necessarily depend upon these distinctions.

STERNAL

STERNAL AND DORSAL.

THESE terms, when applied to the head, will signify parts in the same plane, in planes parallel, or nearly parallel to the sternum and dorsum; and should the sternum and dorsum be parallel, these planes will always be *sternal* which are on the *sternal* side, and those *dorsal* which are on the *dorsal* side of the vertebral line.

In the human species the whole face bounded by the chin, the hairy scalp, and the two lateral parts of the head, will be *sternal*.—In sheep and oxen, when the head is in the usual position, with the base seemingly at right angles to the vertebral line, the maxillary curves only will be *sternal*.—But in serpents and frogs, the basis of the cranium will be found *sternal*, while the maxillary curves will become *atlantal*.

In the human species, the word *dorsal* will denote the rising part of the occipital bone and posterior part of the two parietals.—In
sheep

sheep and oxen, not only a part of the occipital bone, but the upper part of the parietal arch, thro' its whole extent, from behind forwards, including a part of the frontal bone.— In serpents and frogs, not only the upper part of the cranium, but likewise most of the bones of the face, which are not on the sides or basis of the head.

It seems to be therefore a general law, that the parts of the head which are atlantal and sternal in man should, in descending through the lower animals, gradually approach more and more to the dorsal situation, and the parts which are sacral more and more to that which is sternal. From knowing therefore the parts of the head which are sternal and dorsal, we will be led to nearly the same general conclusions that we drew from the points *atlantal* and *sacral*; we will learn the relative position of the head with regard to the trunk, the situation of the foramen, the usual attitude of the animal in motion, the form of the cranium, and how far it deviates from the human shape. We
may

may also acquire, in this way, some general idea of the nervous system. The proportion between the diameters of the cranium and foramen magnum is usually connected with the shape of the head and the situation of the foramen: from knowing therefore the shape and situation, we may form some idea of the relative proportion of the two diameters; and from knowing the proportion of the two diameters, we may know the proportion between the brain and the spinal marrow; and as the sagacity and vital energy seems to be regulated by this proportion, we hence may form pretty accurate conjectures with respect to the degree of the intellectual functions, the tenaciousness of life, and power of reproduction possessed by the animal.

But altho' the extension of these terms may be highly useful in many physiological deductions, they are not adapted to the separate anatomical description of the head. In the case of a description, the head, which consists of two parts, the cranium and face, necessarily requires

quires terms of its own, as well as the trunk and the extremities; and these terms might be borrowed from the bones, if it were possible in that way to make them precise. But, unfortunately, in the cranium there are no bones, not even the ethmoidal, entirely confined to one of its aspects; and the bones of the face vary so much in their form, proportion, and general appearance in different animals, that they are equally unfit for our purpose. We must therefore endeavour to contrive names for describing the aspects of the cranium and face, that contain no allusion to the situation of particular parts.

Taking the head as a whole, these aspects should be eight in number; but supposing the falx a *mesial* plane, dividing it into two similar halves, they will amount to nine; and by dividing it into cranium and face, a tenth may be necessary. But as *dermal*, *central*, *dextral*, *sinistral*, and *mesial*, are equally applicable to the head and trunk, we only require five that are new: two for the base and crown of the

the head, two for the hind and fore part of the cranium, and one for the face.

The base and crown of the head, which are opposite, may be called the BASILAR and CORONAL aspects.

Between these two and the lateral aspects there is a projecting part of the cranium behind, which the Romans called *occiput*, and the Greeks *inion*. The Greek word is preferable to the Latin, as it does not convey any allusion to the occipital bone, which is found in two different aspects, the *basilar*, and that which may now be called *INIAL*.

In the opposite extremity of the cranium, where the nasal bones are found connected with the os frontis, there is a part which some anatomists who have written in Latin have called *glabella*. This particular aspect of the cranium, the aspect which is always opposed to the *inion*, may be named *GLABELLAR*.

The part of the face which is placed at the greatest distance from the *inion*, following the course of a straight line, is in some animals a part of the inferior, in others a part of the su-

K

perior

perior maxillary bone, or in birds, of the mandibles which correspond to them, this distant part of the face, whatever that happens to be, may be called the **ANTINION**.

So that the ten aspects of the head will be the **DERMAL**, **CENTRAL**, and **MESIAL**, the **DEXTRAL** and **SINISTRAL**, the **CORONAL** and **BASILAR**, the **INIAL**, **ANTINIAL**, and the **GLABELLAR**.

Of the last seven, if lines be drawn between every two of the opposite aspects, they will constitute the four following diameters: The **DEXTRO-SINISTRAL**, the **CORONO-BASILAR**, the **INIO-GLABELLAR**, and the **INANTINIAL***. The two former may be taken at different places of the cranium, towards the *glabella*, where it has in general the least depth and the least breadth, and towards the *inion*, where the depth and breadth are usually greatest; the first behind the temporal processes of the os frontis; and the other opposite to the prominent parts of the parietals, or of the parietal, as in sheep, oxen, &c.

* *Inantinial*, a contraction for *Inio-antinial*.

&c. where the sagittal future is found only in the os frontis, and where one bone supplies the place of the two parietals. In this way we shall have two *dextro-finiſtral* and two *corono-baſilar* diameters.

The meaſurement of theſe ſeveral diameters will ſhew the limits of varying proportion in the heads and craniums* of the ſame ſpecies; and when applied to comparative anatomy, will diſcover a number of ſpecific differences as we aſcend in the ſcale of being. The *inio-glabel-lar*, the two *corono-baſilar*, and the two *dextro-finiſtral*, or tranſverſe diameters, will, in general, be found to have a leſs proportion to the *inantinial* than they have in man. The *inantinial* appears therefore to have ſome connection with the *facial* angle, which gradually diminifhes as the *inantinial* diameter increaſes. Should any of my readers require an explanation of this angle, it is formed by two lines, one drawn from the middle of the *meatus auditorius externus*

K 2

to

* An Engliſh plural inſtead of *crania*, as the ſingular is partly naturalized.

to the inferior part of the nostril, and another called the *facial* line, drawn from the same part of the nostril to the superciliary ridge of the os frontis. In some of the Grecian antiques, this is an angle of 100 degrees, and in some negroes an angle of 70. When beyond 100, the face is monstrous; when below 70, it is that of a brute. Even when 100, the face is unnatural; and it is very seldom indeed that we ever find it so high as 90.

In the Grecian antiques, the maxillary bones, with the depth and firmness of maturer years, retain the shortness peculiar to youth; and are never lengthened so as to hold a quantity of teeth of the number and dimensions that are usually found in the jaws of an adult. The brow therefore projects beyond the face, and the nose descends in a straight line. In reasoning coolly, the form would strike us at once as absurd, and as an unjustifiable deviation from nature; but the senses and passions get interested, and we feel pleased with the genius of the artist who, thus combining with taste and judgment whatever is comely and beautiful in youth, with what is
noble

noble and dignified in age, insensibly produces an agreeable impression. Although the features be rather extraordinary, we feel pleased with the general appearance, in the same manner, as we like to see what is not very common; as a steady and prudent manliness in a child, and a certain degree of sprightly vivacity in an old man. But should it be asked, Why a similar projection of the face should be less agreeable than that of the forehead? the answer is obvious: The projection of the forehead, to the extent in which it is carried in the Grecian antiquities, only surpasses our standard of excellence; and so always impresses us with an idea of a more than usual dignity in the countenance. The projection of the face, on the other hand, is rather below our ideal standard; necessarily lengthens the *inartificial* diameter; and produces an appearance that is very nearly approximate to the brutes. The association of our ideas, it must be allowed, has also its influence. Many of the Simiæ, though beautiful in themselves, become exceedingly ugly and disgusting when viewed as men, or as

intended imitations of our species; while the longer face and the more receding forehead of the greyhound are deemed elegant, because he is tried by a standard of his own, and no comparison secretly instituted between him and man.

The facial line does not therefore show what is beautiful and deformed in nature; but merely ascertains the inclination of the face to that line which is drawn from the ear to the inferior part of the nostril. In Camper's figures, this line is always supposed to be horizontal, and drawn from the middle part of the orifice of the *meatus auditorius externus*. Did Camper foresee that this line might change its position while the form of the head continued the same?

In the young skeleton, where the bony meatus is entirely wanting, and where the line must consequently be drawn from the middle of the ring to which the *membrana tympani* is attached, will its direction be found the same, with regard to the face, as in the adult? Certainly not. The *membrana tympani*, or bottom of the external meatus, is more forward, inward, and

and downward, than the orifice where it is joined to the concha; and therefore the direction of this line, with regard to the head, must vary with the changes and relative situation of the meatus; a situation which is known to be different in different animals. In the cat, for instance, it enters horizontally; is more *basilar* than the zygomatic arch; and its *basilar* margin, if we now may venture to use that language, is more basilar than the base itself, or advances farther in the basilar direction.

In the babyroussa, the meatus is long; runs from the tympanum in the *coronal*, *lateral*, and *inial* directions; or rises upwards, outwards, and backwards, supposing the erect posture of the animal, and the base of the head at right angles to the vertebral column. In this animal the external orifice of the meatus is more *coronal* than the zygoma, or more towards the crown of the head. If in these two instances, therefore, we were, in the manner of Camper, to draw the horizontal line from the middle of the orifice of the meatus, we should draw it from different points of the head, or from

points that do not correspond in relative situation.

The other point to which it is drawn is likewise variable with respect to position. In man and quadrupeds it is found near the maxillary curve. In birds it is sometimes at one extremity of the maxilla, sometimes at the other, and sometimes in the middle. In cetaceous animals, the spiracula, or breathing holes, run in a direction obliquely from the base towards the *corona*, and terminate in the face near the *glabellar* part of the cranium. The angle formed by the facial line and the horizontal, in such cases, would, in some instances, be larger than the human: For these reasons, if we wish to ascertain the shape of the head in any respect, it would be more accurate, instead of this *auri-nasal* line, to draw a *basilar*, or even two *basilar* lines; one running along the basilar side of the palatine plate of the upper maxilla, and another along the base of the lower maxilla, and both produced, till they meet the facial line. With this line, which is likewise produced, they will form

form two angles; one, the *basifacial* of the superior or *coronal*; and the other, the *basifacial* of the inferior or *basilar* maxilla.

Where the line drawn on the palatine plate is interrupted by the alveolar process, a line may be drawn from the *dermal* side on the supposed continuation of the palatine plane.

Where the palatine plate is convex or concave, the line is supposed to be drawn on a plane that passes through its *inial* and *antinal* extremities; and in the other maxilla, if the basilar side be convex or concave, it is supposed to be drawn on a plane that proceeds from the angles to the *basilar* or lower side of the curvature.

As the palatine plate is either parallel, or nearly parallel to the plane of the mouth, the angle formed by that plane and the facial line may also be taken, and distinguished from the others by the name of the *ori-facial* angle; nay, as this angle may always be easily and accurately taken in the living body, it may oftener be useful in ascertaining, analogically, the inclination of the face and the form of the head than the other two.

Should

Should the question be put, What advantages are we to expect in compensation for all this trouble? the answer is, That a steady attention to these lines, diameters, and angles, must lead to more clear and precise ideas than we hitherto have had upon the comparative anatomy of the head; and if ever a language peculiarly fitted to express these ideas were generally adopted, no anatomist, no physiologist, or physiognomist, would presume to indulge in vague declamation; or venture, with any reason, to complain, from affectation of mystery, or of something new, that he wanted terms to express his thoughts and his singular observations.

It is true that every object in nature will exhibit a number of discriminating characters if accurately examined, and every one may have marks of his own by which he distinguishes them; but if every one should describe an object only by marks peculiar to himself, we should never discover that the object was the same; but rather conclude, that the objects were as different

erent as the descriptions. In this way, no one could possibly understand the descriptions of another; and one might describe an object as new which had been described an hundred times before. It is therefore necessary to attend to marks of a certain kind, particularly those by which an object is classified and arranged. After acquainting us with these characters, we come to know the genus and species to which it belongs; and then an author may enumerate as many characters as he chooses, for now we begin to understand the subject of which he is treating. It was thus by directing the attention of mankind to certain characters, that Linnæus taught naturalists all to speak in the same language, and to be intelligible to one another; and it is by adopting a similar method that we ever can expect, on rational principles, to improve our knowledge in general anatomy. It is therefore to be hoped that were anatomists, in describing the heads of different animals, always to give us the proportions and magnitudes of certain lines, diameters,

diameters, and angles, we should very soon acquire more general, and precise information upon that subject than we now possess.

As an accurate knowledge of relative position is likewise of the greatest importance in anatomy, we should never neglect, where it is possible, to mention the situation and aspect of every part that is worthy of notice. A careful attention to these circumstances will gradually secure to us more accuracy, with regard to descriptions in surgery, physic, zoology, and anatomy; will render our knowledge of the uses and functions more perfect; and will therefore give more than an ordinary degree of clearness and precision to our physiological reasonings and conclusions.

The terms here suggested for the head containing no allusion to the bones, and being somewhat different in principle from several of those which have been suggested for the trunk and extremities, I shall illustrate the mode of applying them by a few examples. Let us take, for instance,

stance, the parietal bone of the human species. It has two sides, one convex and the other concave; which, in point of aspect, are *dermal* and *central*. In point of situation, *coronal* and *lateral*. It has four margins, which, in point of situation, are likewise found *coronal* and *lateral*; but, in point of aspect, *glabellar*, *mesial*, *inial*, and *basilar*. It has also four angles, each an angle lying between two of the different margins; and which therefore may be named the *glabello-mesial*, *glabello-basilar*, the *inio-mesial*, and the *inio-basilar*.

Examining this bone in the deer and sheep, where we see no division by sagittal future, its two surfaces are convex and concave; and in point of aspect, *dermal* and *central*, as they are in man. In point of situation, they are somewhat different, being *inial* and *lateral*; and with respect to the different aspects of its four margins, two are *antinial*, one *coronal*, and a fourth *basilar*.

Take the frontal bone of the human subject as another illustration. Its two surfaces are
dermal

dermal and *central*; their situations *coronal*, *basilar*, *lateral*, *glabellar*; the aspect of its margins, where connected with the sphenoidal bone and *glabellar* part of the ethmoidal, is *inial*; where connected with the lateral part of the ethmoidal bone, *mesial*; where it joins the malar bone, *lateral*; and where it meets the nasal and maxillary bones, *basilar*.

The eye will serve for our last illustration. In the human subject its situation is *glabellar*. The aspect of the pupil, as in all animals, *peripheral* or *dermal*; but where the nerve enters, it is *inial*, or, more strictly speaking, *inio-mesial*. The other aspects are *coronal*, *basilar*, *lateral*, and *mesial*.

In those animals where the eyes are in the lateral parts of the head, the pupil is *dermal*, the entrance of the nerve *mesial*; the other aspects *coronal*, *basilar*, *inial*, *antinal*.

Where the situation of the eye is *coronal*, the pupil is *dermal*, the entrance of the nerve *basilar*; the other aspects *inial*, *antinal*, *lateral*, and *mesial*.

Such

Such language, it will easily be seen, is chiefly necessary in comparative anatomy, where we soon learn that the singular variety which we discover in the actions, habits, and functions of animals is principally owing to certain changes or modifications in the intimate structure, in the relative magnitude, situation, and aspects of the different organs; and where we perceive, that the Author of Nature has by these changes varied the same general fabric innumerable ways; given it a thousand different instincts, appetites, and passions; adapted it to every element and climate, and to endless diversities with respect to food and the modes of life.

As the means by which He has produced these effects cannot be thought unworthy of inquiry, a language calculated to express the circumstances on which they depend, must surely be desirable to every person the least interested in zoological investigations. In mere changes of aspect and position, the naturalist must observe a number of important and specific differences; the physiologist must see correspondent and necessary

necessary changes on the functions ; and the natural theologist, in such changes, cannot fail to remark, with peculiar satisfaction, the admirable displays of that boundless power, wisdom, and foresight, by which the great Sovereign of the Universe has peopled the air, the water, and the earth, with innumerable myriads of animated beings ; varied the same general structure so as to suit every possible circumstance ; and, amidst the daily and the hourly millions of those events which we call contingencies, secured the perpetuity of the species, fixed the time of individual existence, regulated the periods of those functions which return occasionally, and every where settled the extent, duration, and succession of those which produce growth, vigour, and decay.

If such speculations accord not with the views of the medical practitioner, he is at least certainly concerned in the knowledge of relative situation and aspect so far as regards the human body ; the surgeon requires it in all his operations ; the physician requires it in reasoning

Reasoning upon symptoms and the seats of disease; and for the anatomist to attempt any description without it, is like venturing to sea without a compass or a star to guide him; like a geographer trying to explain a map without lines of meridian or longitude, where he cannot distinguish the north from the south, and has no scale to ascertain the relative distances. In short, without a knowledge of position and aspect, he is a traveller wandering at random, blind and in the dark, not able to say whence he came nor whither he is going, and who steps as readily over a precipice or into a river as he does into the road.

CHAP. VII.THE NEW TERMS ENUMERATED.

FOR THE HEAD.

See Page 144, &c. and Plates III. IV. V.

Coronal

Basilar

Inial

Glabellar

Antinial

FOR THE TRUNK.

See p. 100. and Pl. I. II.

Atlantal

Sacral

Dorsal

Sternal

To be occasionally extended to the head, when we mean to express its relative situation with regard to the trunk. See p. 102.

TERMS

TERMS COMMON TO THE HEAD AND TRUNK.

See p. 121. and Pl. I. II. III.

Dextral

Siniftral

Lateral

Mefial

FOR THE ATLANTAL EXTREMITIES.

See p. 124, 125. and Pl. I. II.

Ulnar

Radial

Anconal

Thenal

FOR THE SACRAL EXTREMITIES.

See p. 127. and Pl. I. II.

Tibial

Fibular

Rotular

Popliteal

TERMS COMMON TO BOTH KINDS OF EXTREMITIES. See p. 124. and Pl. I. II.

Proximal

Distal

TERMS COMMON TO THE HEAD, TRUNK, AND EXTREMITIES. See p. 120.

Dermal

Peripheral

Central

SECT.

 SECT. I.

*The new Terms, by a change of Termination,
may be used Adverbially.*

INSTEAD of the words *upward, downward, backward, forward, outward, inward, and toward*, which so frequently occur in almost every anatomical description, and in a sense fully as vague as *superior, inferior, posterior, anterior, external, and internal*, we may, with a slight degree of variation, employ the new terms as so many adverbs. Thus,

IN THE HEAD,

Coronad will signify towards the coronal aspect
 Bafilad towards the basilar
 Iniad towards the inial
 Glabellad towards the glabellar
 Antiniad towards the antinial

IN THE TRUNK,

Atlantad will signify towards the atlantal aspect
 Sacrad towards the sacral
 Dorfad towards the dorsal
 Sternad towards the sternal

IN THE HEAD AND TRUNK,

Dextrad will signify towards the dextral aspect
 Sinistrad towards the sinistral
 Laterad towards the lateral
 Mesiad towards the mesial

IN THE ATLANTAL EXTREMITIES,

Ulnad will signify towards the ulnar aspect
 Radiad towards the radial
 Anconad towards the anconal
 Thenad towards the thenal

IN THE SACRAL EXTREMITIES,

Tibiad will signify towards the tibial aspect
 Fibulad towards the fibular
 Rotulad towards the rotular
 Poplitead towards the popliteal

IN BOTH KINDS OF EXTREMITIES,

Proximad will signify towards the proximate aspect

Distad towards the distant

IN THE HEAD, TRUNK, AND EXTREMITIES,

Dermad will signify towards the dermal aspect

Peripherad towards the circumference

Centrad towards the centre

SECT. II.

The new Terms, by another change of Termination, may express Connection.

WHAT belongs to the *atlas*, *sternum*, and *sacrum*; to the *radius*, *ulna*, and *ancon*; to the *tibia*, *fibula*, *rotula*, and *poples*, being somewhat different from that which belongs only to their aspect or situation, in order to prevent any confusion, it may be necessary to mark the distinction by another change in the termination. Thus,

Atlanten

Sacren

Sternen

Radien

Ulnen

Anconen

Tibien

Fibulen

Rotulen

Popliteen

May

May be used in cases where the reference is not merely to the aspect, but to the part from which the aspect has derived its name. On this principle a *radial* artery, or a *radial* muscle, will be an artery or muscle belonging merely to the *radial* aspect; while a *radien* artery will be one that enters the radius itself, and a *radien* muscle one particularly connected with the radius by origin or insertion. Or the principle may even be extended farther, and a regular distinction made between the terms that denote simply position or aspect, and those which imply a particular connection. For instance, let the terms of the first kind always terminate in *al* or *ar*, and those of the second always in *en*, as represented in the following columns.

Coronal	Coronen
Basilar	Basilen
Inial	Inien
Glabellar	Glabellen
Antinial	Antinien
	Atlantal

Atlantal	Atlanten
----------	----------

Sacral	Sacren
--------	--------

Sternal	Sternen
---------	---------

Dorsal	Dorsen
--------	--------

Dextral	Dextren
---------	---------

Siniftral	Siniftren
-----------	-----------

Lateral	Lateren
---------	---------

Medial	Medien
--------	--------

Radial	Radien
--------	--------

Ulnar	Ulnen
-------	-------

Aconal	Anconen
--------	---------

Thenal	Thenen
--------	--------

Tibial	Tibien
--------	--------

Fibular	Fibulen
---------	---------

Rotular	Rotulen
---------	---------

Popliteal	Popliteen
-----------	-----------

Distal	Disten
--------	--------

Proximal	Proximen
----------	----------

Dermal

Dermal	Dermen
Peripheral	Peripheren
Central	Centren

NAY, as there are other terms in anatomy which allude to particular positions and aspects, and which are likewise occasionally employed to denote a different sort of connection, it might also contribute to accuracy of description to intimate this difference in their sense by a similar difference in their termination. I shall here enumerate several of the terms to which I allude.

Frontal	Fronten
Parietal	Parieten
Temporal	Temporen
Occipital	Occipiten
Sphenoidal	Sphenoiden
Ethmoidal	Ethmoiden
Nasal	Nasen
Malar	Malen
Maxillar	Maxillen

Cervical

Cervical	Cervicen
Lumbar	Lumben
Costal	Costen
Chondral	Chondren
Clavicular or Clavar	Claviculen or Claven
Scapular	Scapulen
Humeral	Humeren
Carpal	Carpen
Metacarpal	Metacarpen
Digital	Digiten
Iliac	Ilien
Pubal	Puben
Ischial	Ischien
Femoral	Femoren
Tarsal	Tarsen
Metatarsal	Metatarsen

But as this change of the termination is intended always to intimate some change in the meaning, it can never be necessary in those cases where the meaning of a word is always the same, or where the meaning is fixed by the context and cannot be mistaken. It would be

as childish and absurd affectation, for instance, to say, fronten, temporen, and parieten bones, or musculen, glandulen, and reticulen structure; when we mean nothing more than what is expressed by the usual words frontal, temporal, parietal, muscular, glandular, and reticular. It should therefore be remembered, that the change is intended only for the cases where the words convey, or are apt to convey, a twofold meaning; where they sometimes allude to position and aspect, sometimes to connection, and where it is proper at the same time to mark the distinction, as often happens in our descriptions of the nerves and blood-vessels, where the double sense most frequently occurs.

SECT.

SECT. III.

To shorten Description, the new Terms may be made to enter into Composition.

IN expressing position, direction, or attachment, the above epithets may occasionally be compounded by substituting *o* for the *al* or *ar* of the first column, and by adding it to the *en* of the second. Thus the position of the heart in the thorax will be expressed by the two compounds *mesio-sinistral* and *atlanto-sacral*; or, using the adverbs, we may say its direction from the mesial plane is *sinistrad* and *sacrad*, or *sinistro-sacrad*. In describing the direction of the superficial femoral artery, we may say that at first it is *rotulo-tibial*, then *tibio-popliteal*. In mentioning the direction of the sartorius, we may say that, like the artery, it is at first *rotulo-tibial*, then *tibio-popliteal*, and at last, after passing the knee-joint, *tibio-rotular*. But
in

in mentioning its attachments, we must lay aside the epithets which are made to terminate in *al* or *ar*, and employ those which terminate in *en*. Thus in expressing its origin and insertion, I would not think of using the word *ilio-tibial*, but *ilieno-tibien*. In many descriptions, though this minuteness may not be necessary, it is always some consolation to reflect, that when it is necessary, we possess a language calculated for such minuteness and accuracy.

SECT.

 SECT. IV.

*Division of the Sanguiferous System into two
Parts, and new Names.*

IF the sanguiferous system of man and others of the nobler animals be divided into two parts, the *Pulmonic* and *Systemic*, in that case there will naturally follow a change in the language resulting from the change of classification, which the Table subjoined is intended to exhibit. See p. 122, 123.

Pulmonic veins.	All the veins which convey blood from the system at large towards the lungs.
Pulmonic sinus.	Right sinus.
Pulmonic auricle.	Right auricle.
Pulmonic ventricle.	Right ventricle.
Pulmonic artery.	Pulmonary artery.
	Systemic

Systemic veins.	Pulmonary veins, or the veins which convey blood from the lungs to the system at large.
Systemic sinus.	Left sinus.
Systemic auricle.	Left auricle.
Systemic ventricle.	Left ventricle.
Systemic artery.	Aorta.

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S. 10. 10. 10.
S. 10. 10. 10.

EXPLANATION OF THE PLATES.

See p. 162, 163, 164.

PLATES I. and II. are two outlines of the skeleton, drawn in the attitude given by Albinus. They show all the aspects of the trunk and extremities except the *dermal* and *central*, which are easily understood without any assistance from a figure.

The four lines in which the trunk and part of the neck are inclosed, exhibit the *atlantal*, *sacral*, *dextral*, and *sinistral* aspects, marked *at. sac. d.l. f.l.* (*d.l.* for *dextral* or *lateral*, and *f.l.* for *sinistral* or *lateral*).

The line drawn in the middle, marked *mes.* is the *sternal* edge of the *mesial* plane, passing through the body from the *sternal* to the dor-

sal aspect, and dividing it into similar and lateral halves.

In the *atlantal* extremities, the four dotted lines marked *r. u. tb.* and *an.* show the *radial*, *ulnar*, *thenal*, and *anconal* aspects. Where the radius is in a state of pronation, the aspects appear to cross one another towards the *carpus*.

In the *facral* extremities, other four lines of the same kind, marked *tib. fib. rot.* and *pop.* show the *tibial*, *fibular*, *rotular*, and *popliteal* aspects. From the relative position, however, of the leg and foot towards the ankle, these lines convey only a general idea of those aspects, which are very easily distinguished in the skeleton and living body.

In both kinds of extremities, the lines marked *prox.* and *dist.* show the *proximal* and *distal* aspects.

PLATE III. shows the aspects of the *head* and the *mesial* plane in different views. Fig. 3. exhibits at the same time the *ino-glabellar* and
the

the *inantinial* diameters; which compare with figures 3. in Plates IV. and V.

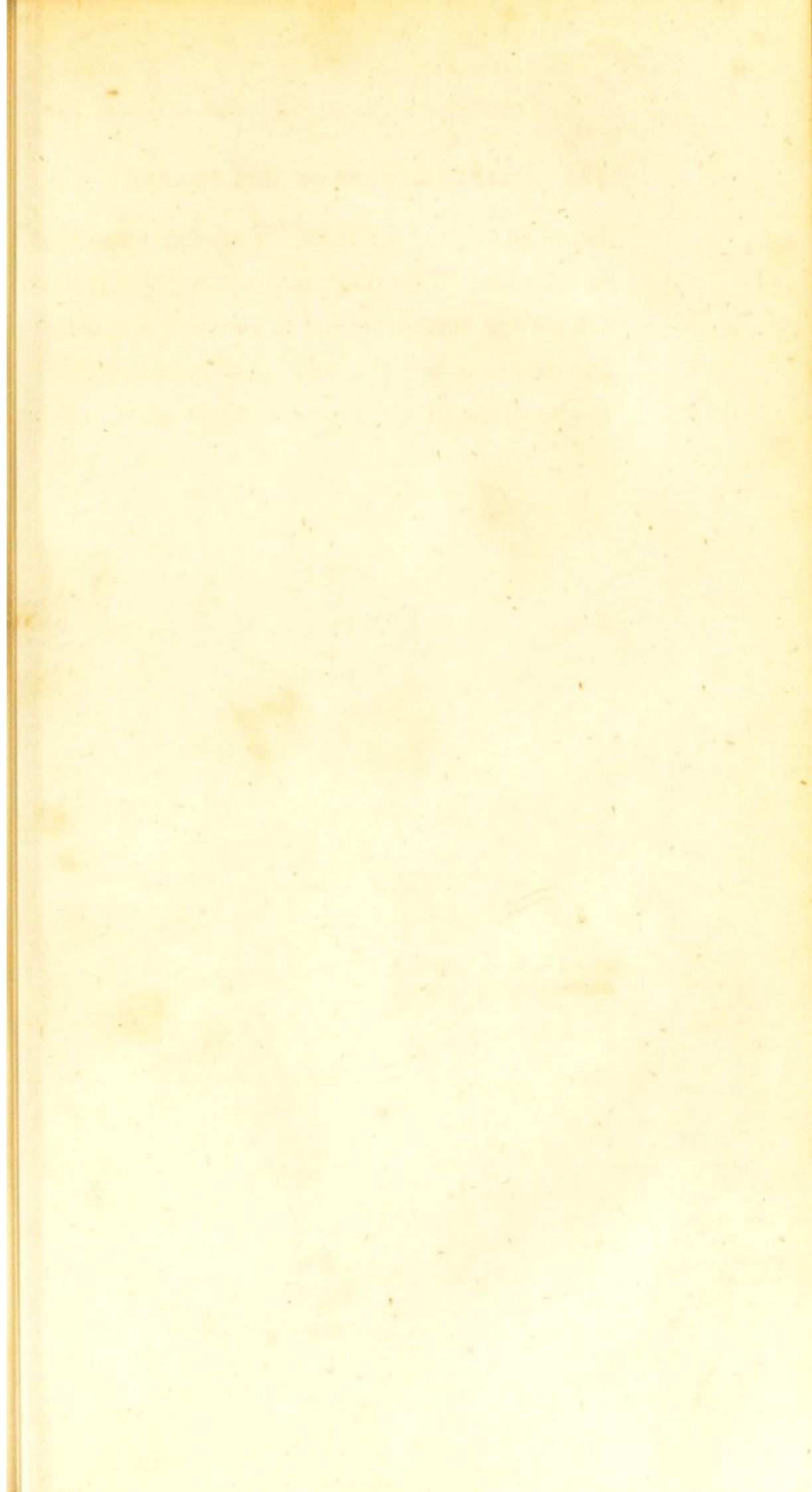
PLATE IV. fig. 1. and 3. show how the aspects of the head and trunk correspond respectively in man and the babyroussa. Fig. 1. shows, besides, the *ori-facial* angle. Fig. 2. the two *bas-facial* angles, and the *ori-facial*. Fig. 3. the *inio-glabellar* and *inantinial* diameters.

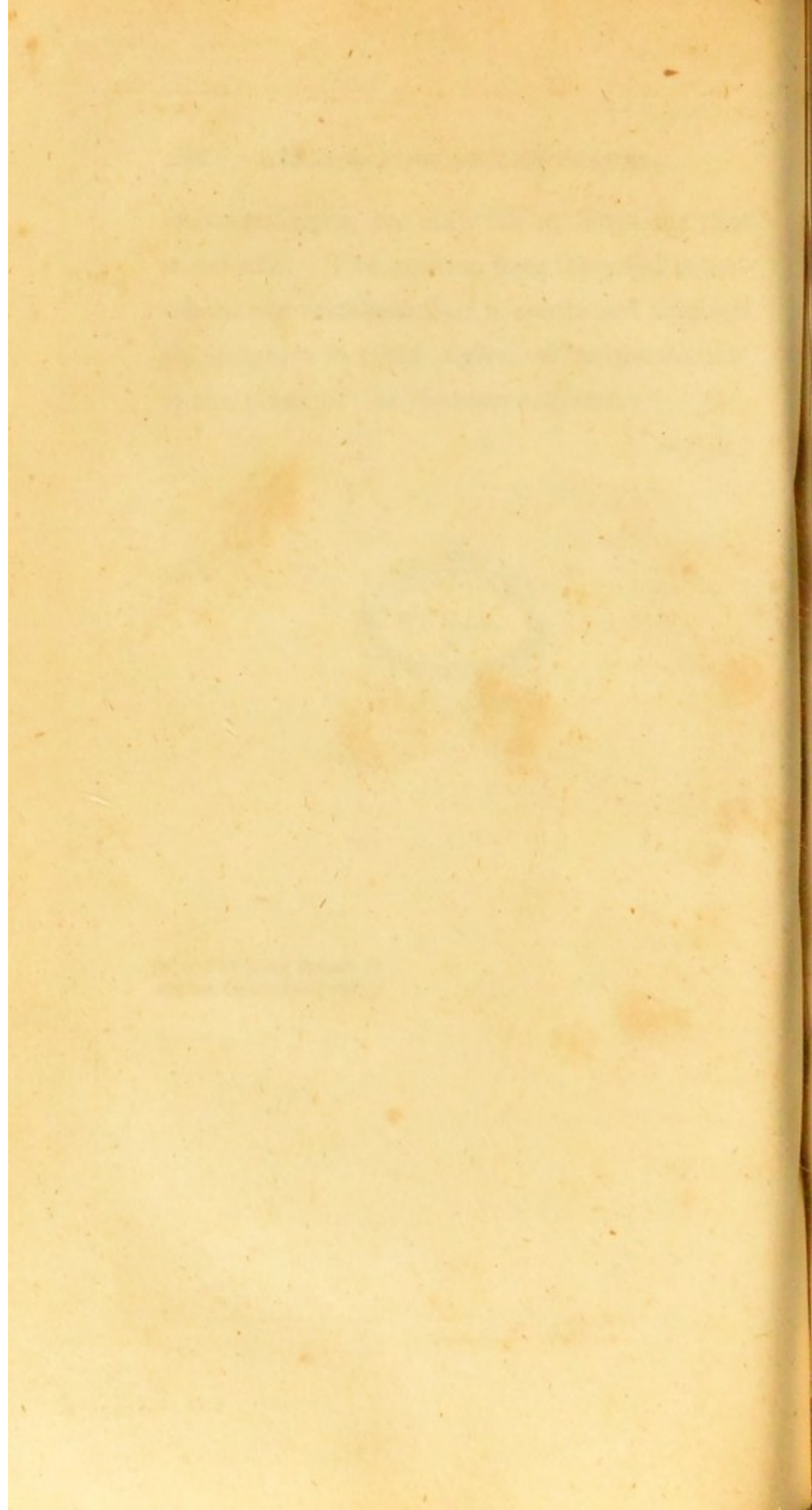
PLATE V. shows farther how the aspects of the head vary with respect to the trunk in different animals; and how the parts that are *atlantal* in man, become *dorsal*; the parts that are *inial*, *sacral*; the parts that are *basilar*, *sternal*; and the parts that are *sternal*, *atlantal* as we descend in the scale of being. These aspects of the head, however, will have other positions with regard to the trunk, according to the motions of the living animal; and different parts may in succession be *sternal*, *dorsal*, *atlantal*, and *sacral*. To guess therefore at the form and structure of the animal, from these relative

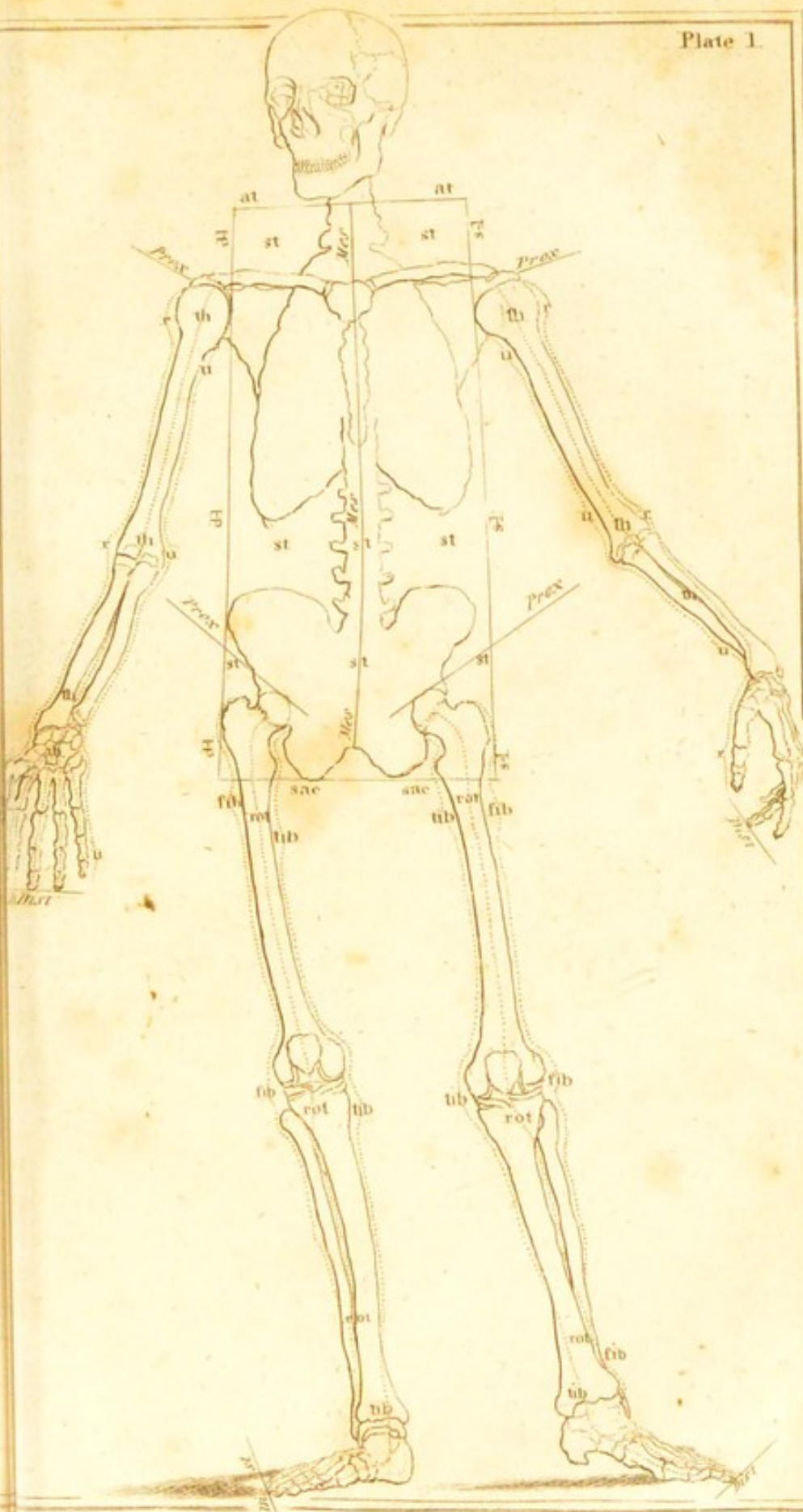
lative positions, we must fix on some one that is definite. The position here supposed is that where the vertebral line is continued through the cranium at right angles, or perpendicular to the plane of the *foramen magnum*.



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Anchor Close, Edinburgh. }







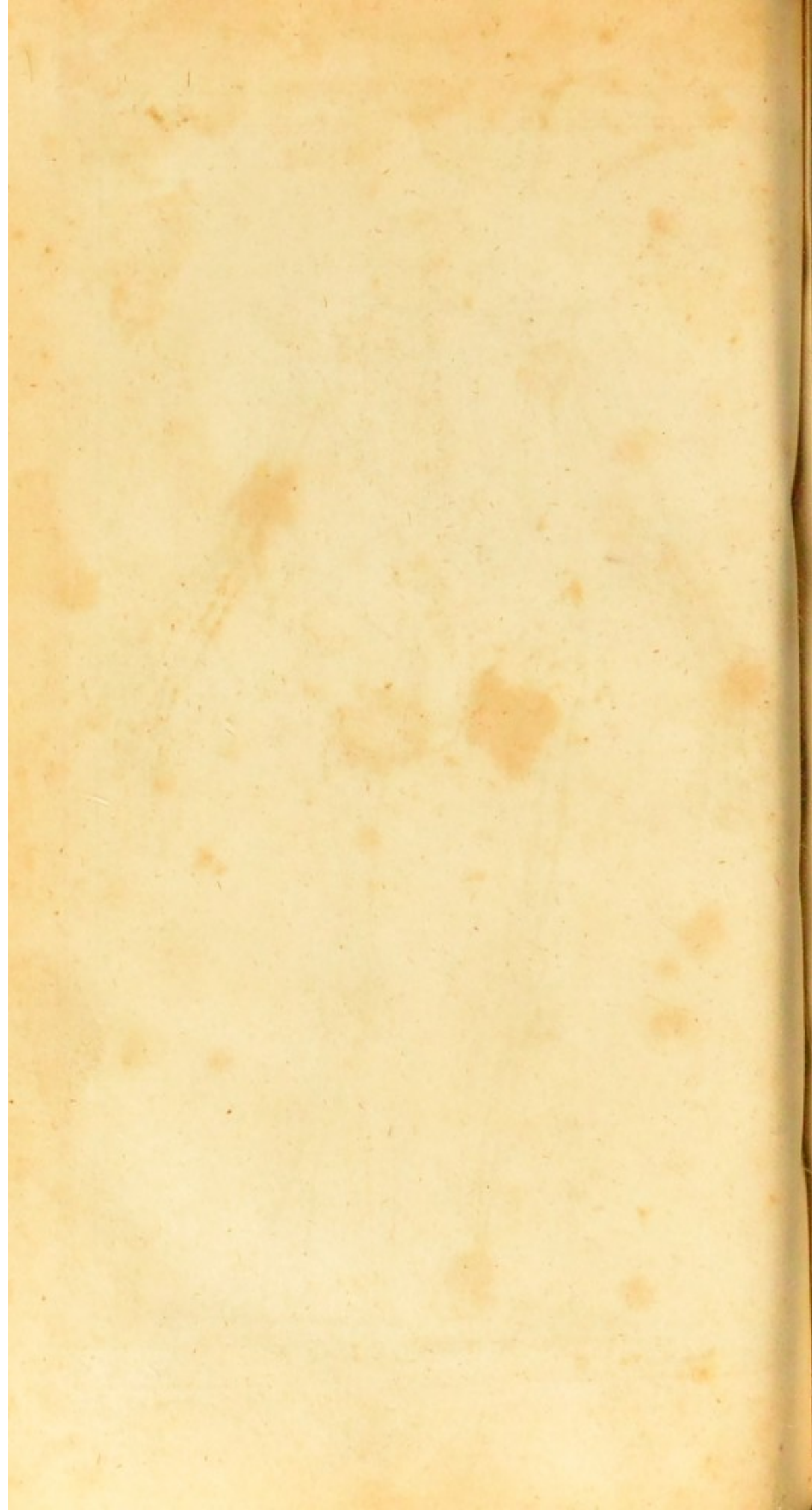
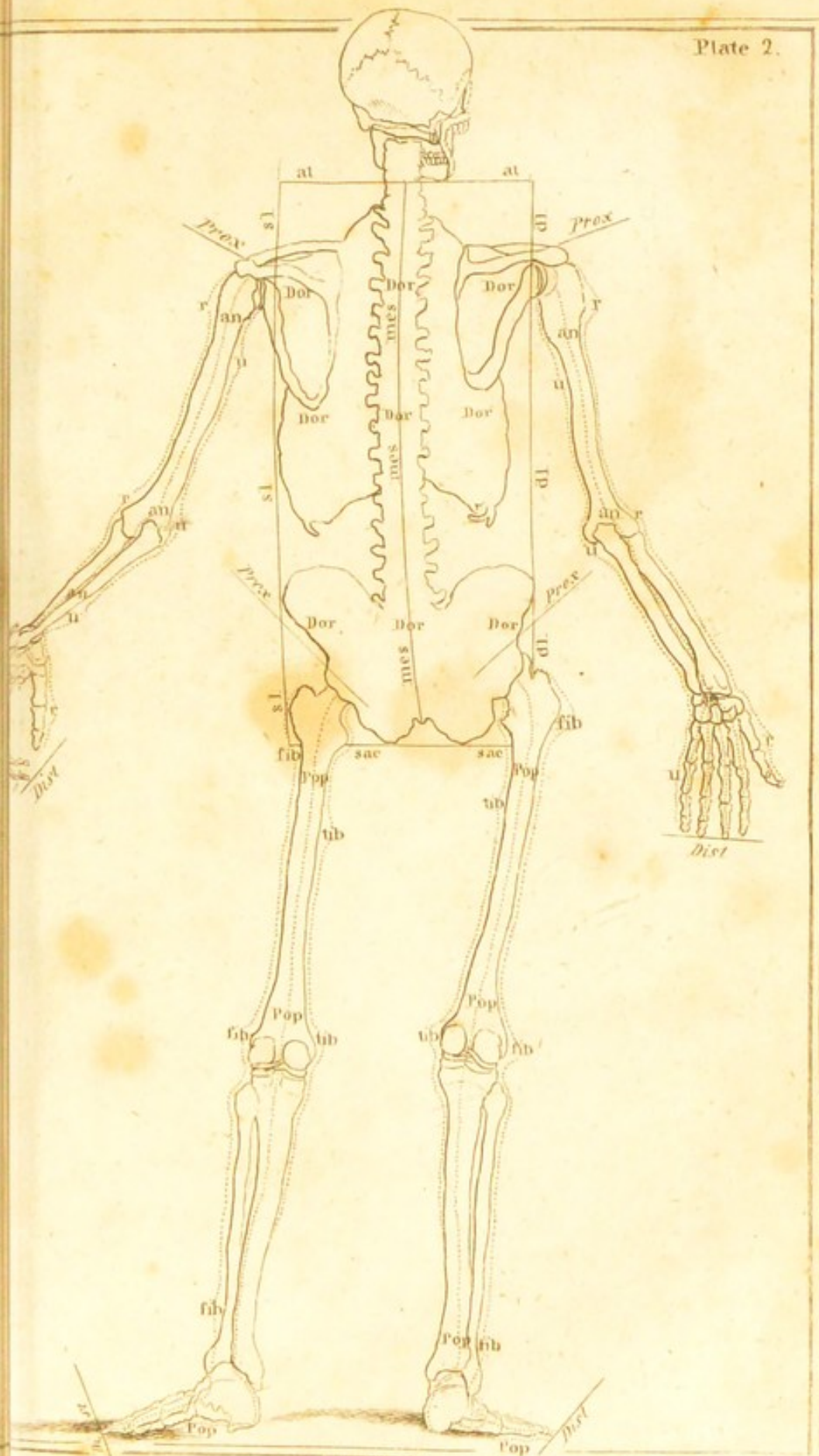


Plate 2.



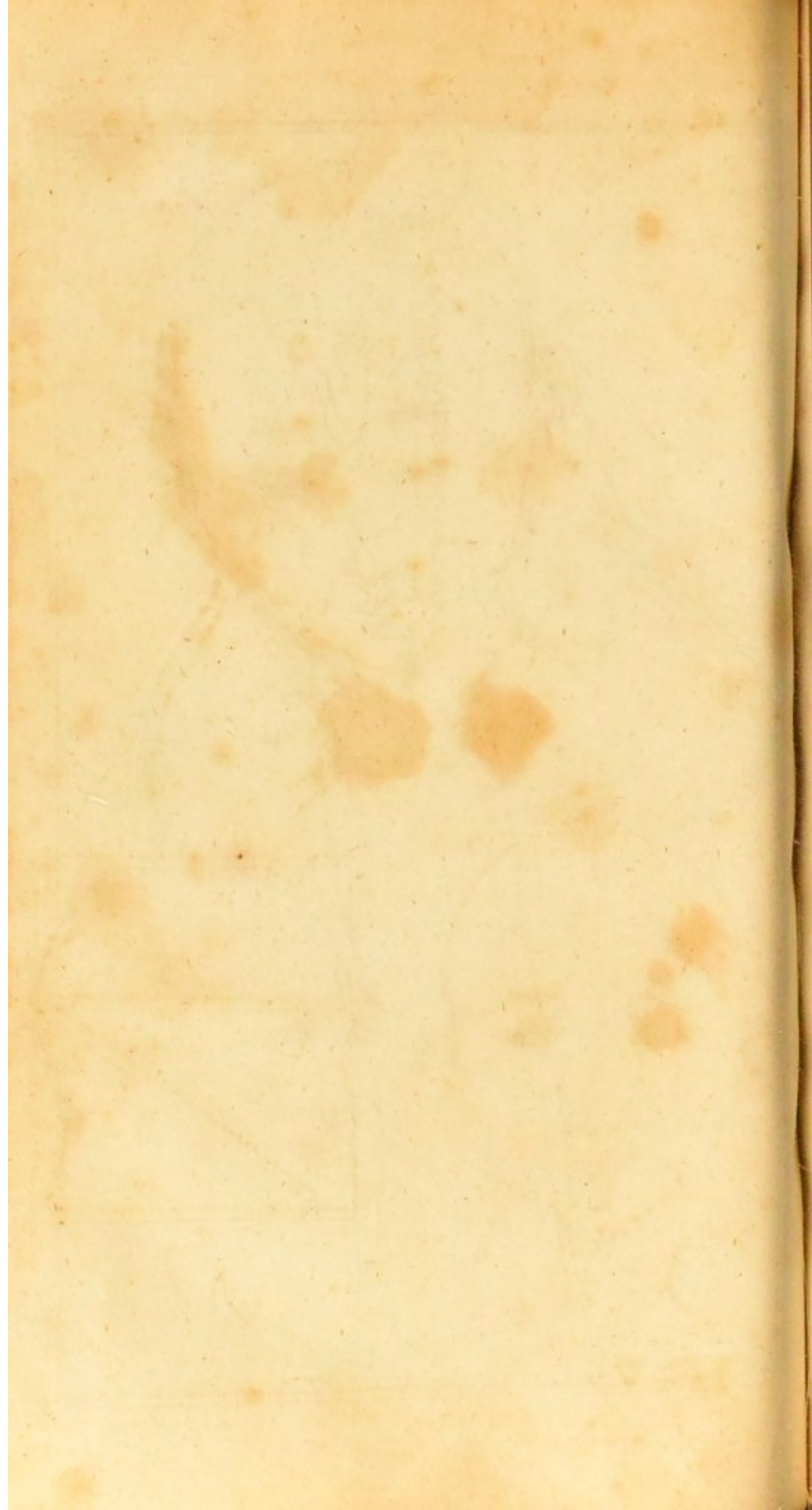


Fig. 1.



Fig. 2.

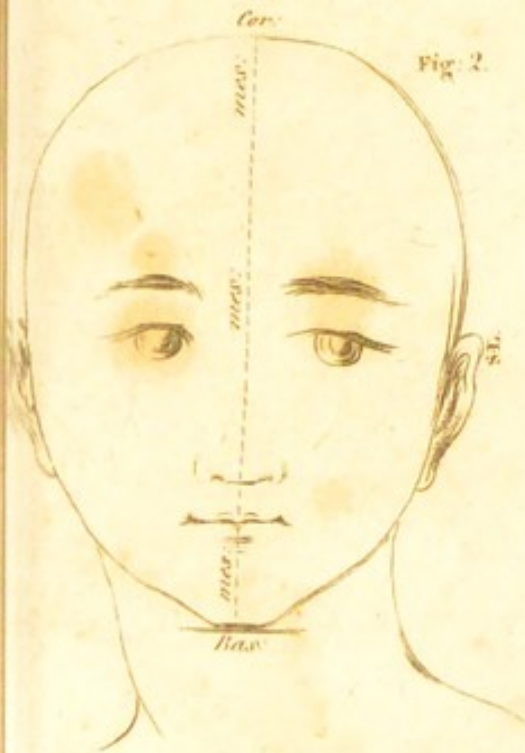


Fig. 3.

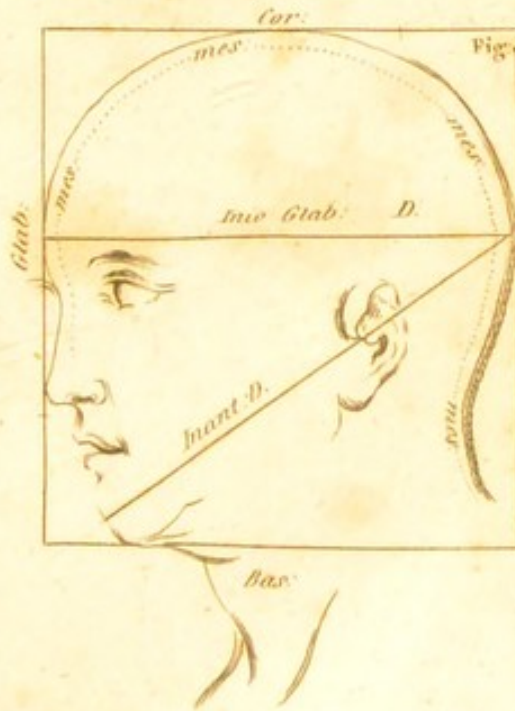
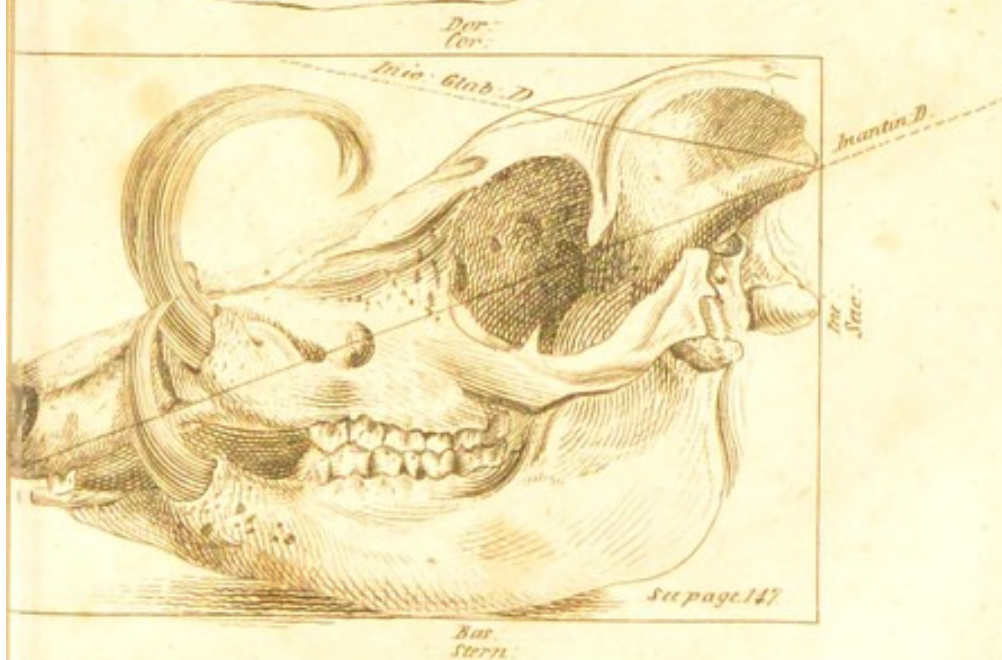
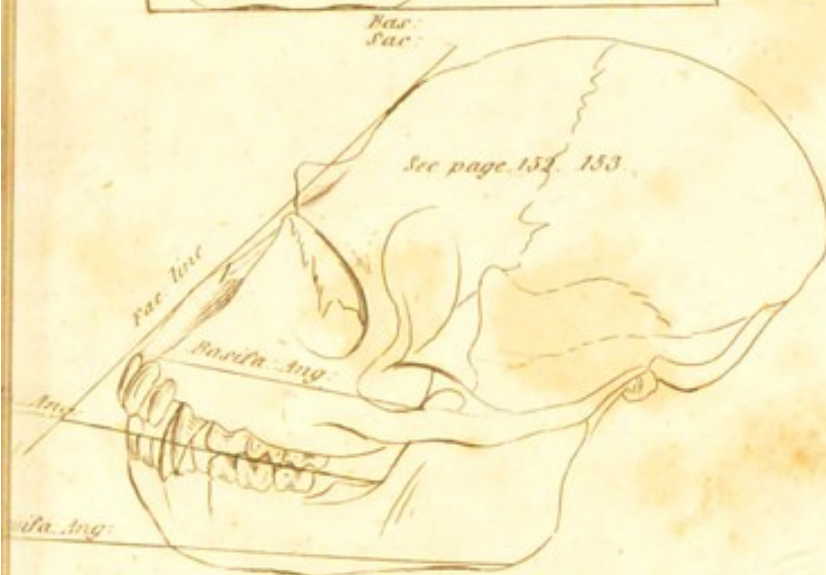
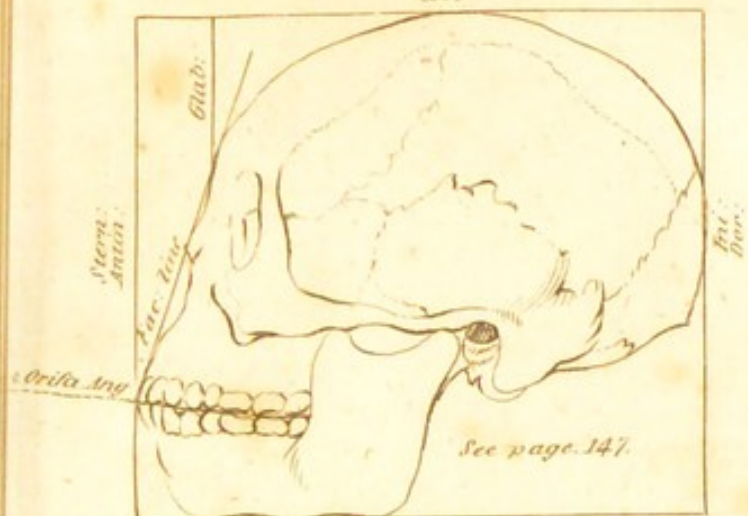




Plate IV

Atlan:
Cer:



Bar.
Stern.

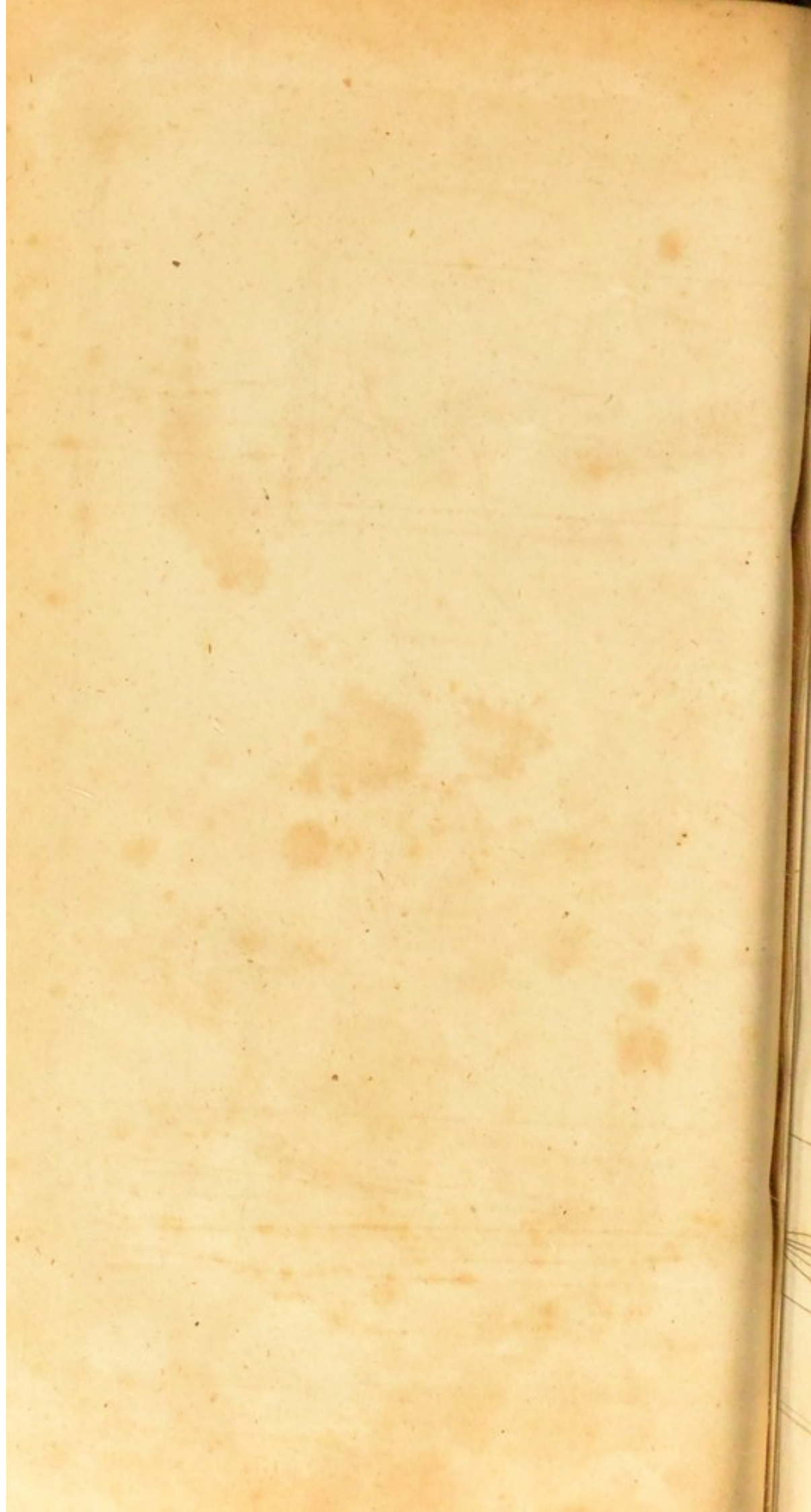
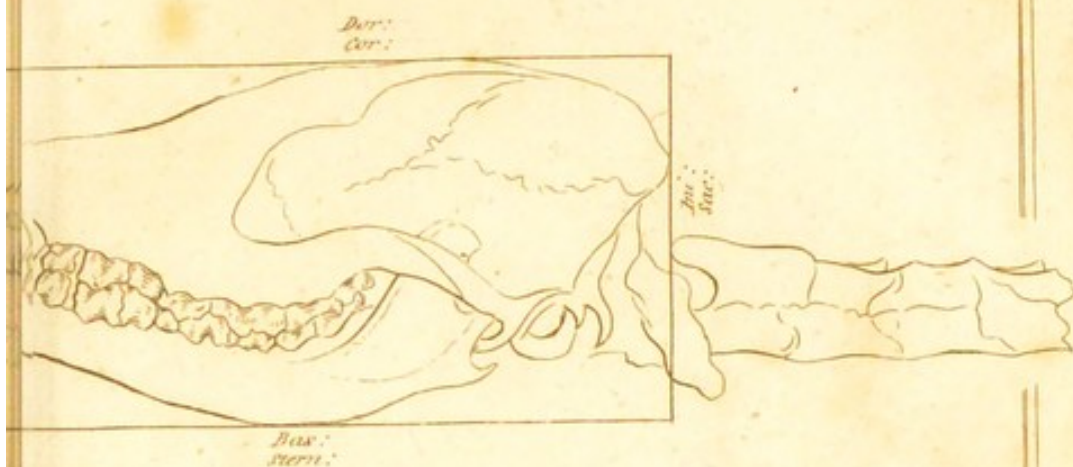
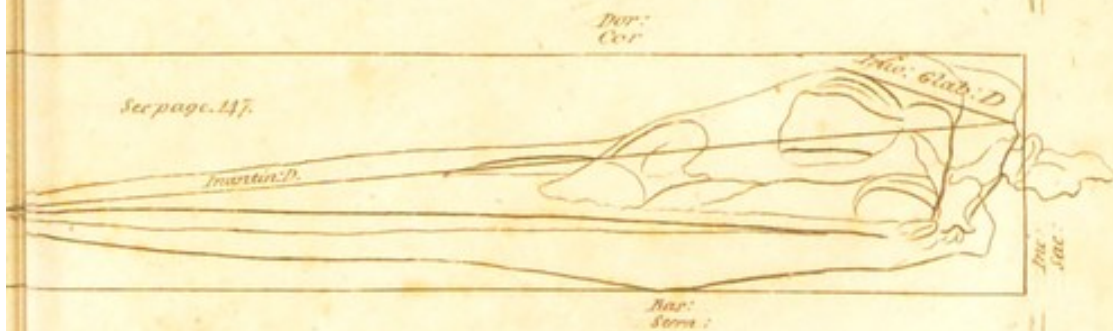
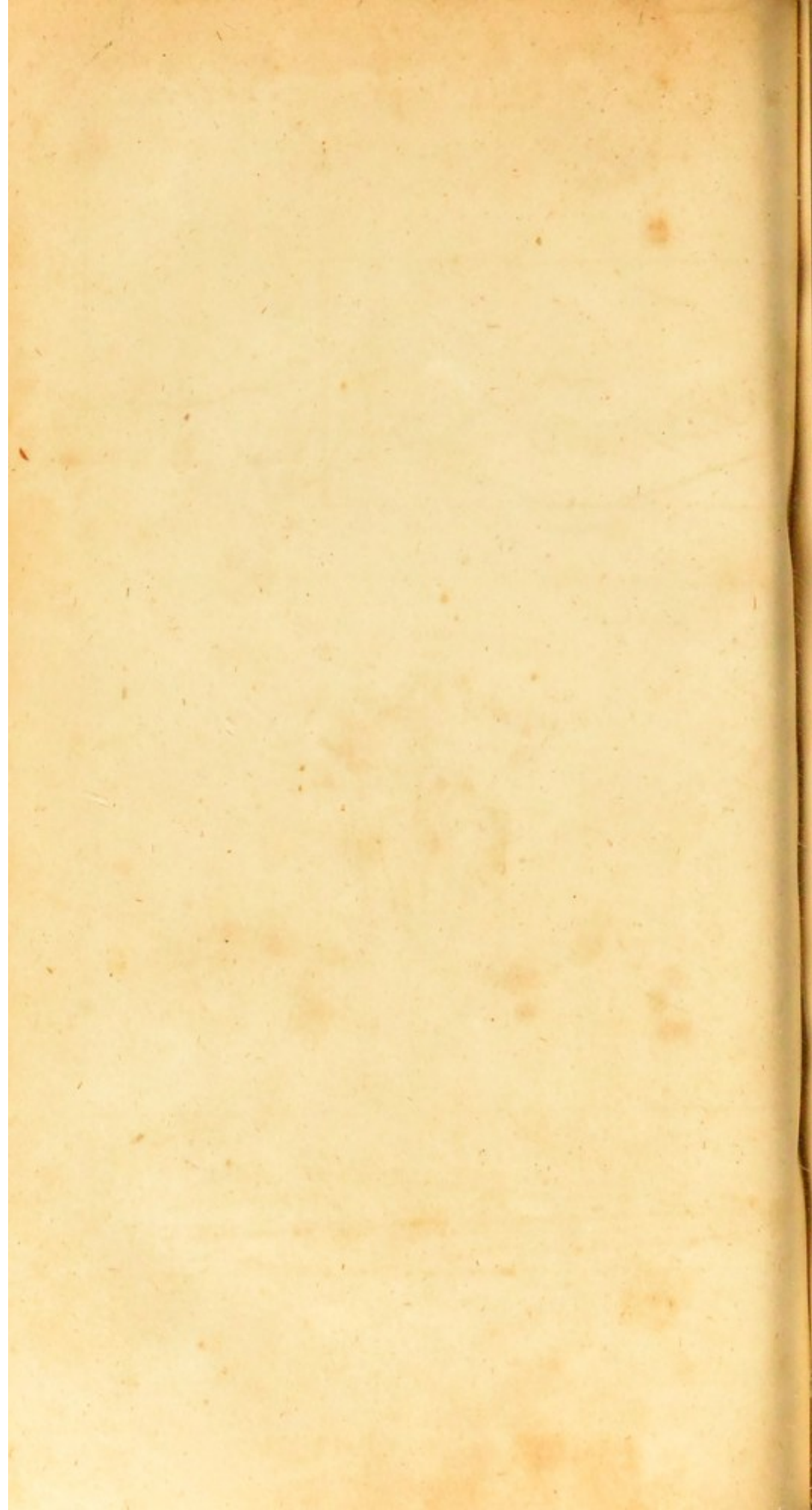


Plate V.



FROG.





EDINBURGH
CLINICAL REPORTS.

Printed by George Ramsay & Co.

REPORTS

OF

THE PRACTICE IN THE CLINICAL WARDS

OF

The Royal Infirmary of Edinburgh,

DURING THE MONTHS OF

NOVEMBER AND DECEMBER 1817, AND JANUARY 1818,

AND

MAY, JUNE, AND JULY, 1818.

BY

ANDREW DUNCAN, JUN. M.D. F.R.S.E.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, PROFESSOR OF MEDICAL POLICE AND MEDICAL JURISPRUDENCE IN THE UNIVERSITY OF EDINBURGH, AND ONE OF THE PHYSICIANS TO THE ROYAL PUBLIC DISPENSARY AND LUNATIC ASYLUM.

I think, better I had an imperfect account transmitted, than none at all.

KIRKTON.

EDINBURGH:

PRINTED FOR ARCHIBALD CONSTABLE AND COMPANY;
AND LONGMAN, HURST, REES, ORME, AND BROWN,
LONDON.

1818.

REPORTS

OF

THE PRACTICE IN THE CLINICAL WARD

OF THE ROYAL INFIRMARY OF EDINBURGH

BY

ANDREW DUNCAN, M.D., F.R.S.E.

AND

MAY, JUNE, AND JULY, 1880

ANDREW DUNCAN, M.D., F.R.S.E.

EDINBURGH: PUBLISHED BY J. & J. CLYDE, 10, N. B. STREET, 1880.

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EDINBURGH:

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EDINBURGH:

EDINBURGH:

TO
THE MANAGERS
OF THE
ROYAL INFIRMARY OF EDINBURGH.

GENTLEMEN,

THE substance of the following Reports was delivered as the concluding lectures of the two last courses of clinical medicine in the University of Edinburgh, upon the cases of patients treated in the Royal Infirmary. I was induced to publish them, in consequence of the late Parliamentary inquiry into the state of fever, and a regret often expressed to me, that, while, from the hospitals of Dublin, Cork, Glasgow, and London, excellent descriptions of the present epidemic had been communicated to the public, no account of it, as observed in the beneficent institution under your charge, had yet been published.

In the concluding lecture of each clinical course, I am in the habit of giving a systematical abstract of the occurrences which have taken place in the wards during the time they have been under my charge ; and I thought that, by revising those delivered upon the two last occasions, and condensing them into one Report, I might, however imperfectly, supply the information wanted.

I was also desirous of laying before you an example of the manner of keeping an abstract of the multiplied experience of great hospitals, without which their utility, as a source of information to the profession, is greatly abridged. Such reports have been often published by hospital physicians in various capitals and schools on the continent of Europe ; and those which we now receive regularly from Dublin are amongst the most valuable medical documents we possess.

I am fully aware of the numerous imperfections of the following pages. They were originally written, literally *currente ca-*

namo, during the pressure of that multiplicity of objects which always demand attention towards the conclusion of a clinical course. For their composition, no other books were consulted than the journals containing the histories of the cases, as originally written by the gentlemen who so ably assisted me as clerks, and the daily reports dictated by myself to the pupils at the bed-sides of the patients. I have, therefore, quoted no authorities, and have entered into no controversy, but have merely attempted to give an abstract of what I saw and did. The remarks subjoined to the tabular view of the cases which were treated, are only those which resulted immediately from the consideration of the facts recorded in it. I have made no laboured attempt to generalize the phenomena of disease observed; but, in order to give a true picture of the most interesting diseases, and especially of our epidemic fever, I have added, in an appendix, a selection of the cases, extracted from the journals of the Hospital.

I trust that what I have done will meet with your approbation. I regret that I have not been able to do more ; and I return you my sincere thanks for having been permitted, through your indulgence, to do so much.

I remain, Gentlemen,

Your much obliged

And very obedient Servant,

ANDREW DUNCAN, Jun.

Argyle Square, }
1st September 1818. }

EDINBURGH CLINICAL REPORTS.

IN prefixing to these Reports some observations on the advantages to be derived from hospital practice, I have no intention to enter fully or minutely into the subject, but shall content myself with pointing out a few particulars which have been suggested to me by some recent inquiries into the state of fever in various parts of the empire.

The primary object of hospitals is undoubtedly the restoration to health of the patients admitted, and, as necessarily connected with this, the practitioner acquires great personal experience, and the pupils, (if there be any,) much valuable instruction. With these beneficial results many hospital practitioners rest satisfied, and altogether neglect another view of the subject, which, in my opinion, is scarcely less important, and is more calculated to indemnify the public for their liberality in supporting these charitable institutions, by tending to improve their economical management, and by collecting

and accumulating a store of professional information on the history of disease, which cannot be acquired in the most extensive private practice.

There are two modes commonly employed for preserving a record of the occurrences in hospital practice ; the one consists in keeping a detailed journal of the cases, and the other in entering certain leading particulars into a tabular scheme. The former, which has always been regularly done, both by the ordinary and clinical physicians of the Edinburgh Royal Infirmary, is indispensable, or at least ought never to be dispensed with ; and to this practice we owe the valuable clinical observations of Dr F. Home, and of Dr Hamilton. The latter is less constantly practised ; but I consider it as scarcely less important. It is true, that if the detailed daily reports be kept regularly and fully, it is possible, by great attention, to extract from them such a tabular view of the principal circumstances as I am recommending ; but by experience I know that an infinite deal of labour would be saved to the practitioner, if he were to make the entries when the circumstances occurred, and while the patients were still in the wards, and accessible for the purpose of further examination, which is often suggested by reviewing the facts resulting from these tabular records. Those practitioners only who are in the habit of doing this, are fully capable of appreciating its value, in enabling them to draw general conclusions from their own practice ; for, when they revise

their tables, they are often astonished how very different the result turns out, from what they expected from the vague recollection of what they themselves had done and seen.

Nor is the trouble of keeping such tabular records so great as might be supposed. It requires only system and regularity; and when we see how easily it is done in the military hospitals, we cannot help regretting that it is not also introduced generally into civil hospitals. If the practitioner himself has not time to fill up the columns of the prescribed table, it would be very little additional trouble to his clerk, or, if the time of this assistant would not easily permit him, the duty would be very gladly undertaken by another of the hospital pupils.

It is however in a different point of view that I am now chiefly considering hospital reports,—I mean as calculated to give information to the profession and to the public, derived from multiplied experience, in a very condensed and intelligible form. The schemes of the report may be various, according to the object in view. To the profession they may be calculated to illustrate particular points in the history of the causes or phenomena of diseases, or the effects of particular modes of practice; while the public at large expect to obtain from them information on some circumstances highly interesting to the community, which can be derived from no other source.

The first point of information to be expected from hospitals is in regard to the state of health

in the places where they are situated. Some of these institutions, however, it appears, publish no report, and some, it is said, even keep no records. Others content themselves with publishing periodically the numbers of the patients admitted, of the deaths, cures, &c. Such a statement will furnish the means of ascertaining the rate of mortality, which may be used for instituting a comparison either with other years or periods in the same hospital, and with the rate of mortality in other hospitals. Without farther information, however, these data will be apt to lead to very erroneous conclusions, and many circumstances must be taken into account before we can establish from the smaller or greater rate of mortality in hospitals, that they are better or worse conducted, or that their medical attendants are more or less skilful. Nay some, as Burserius and Joseph Frank, have maintained the opposite doctrine; and although it may at first appear paradoxical that the rate of mortality should rise with the improvement of management and increase of skill, yet experience in some hospitals and places warrants the conclusion in a certain respect. The mortality in the Hotel Dieu of Paris rose uniformly as ameliorations in its management proceeded, after the anarchy of the revolution had ceased, and philanthropic minds again attended to the miseries of the poor; and in London, it is said, the mortality is highest in the best conducted hospitals. The solution of the paradox is easy. As hos-

Hospitals are every where limited in their extent and funds, it is obvious that they are best managed when they do the greatest good their means can effect; and this important object is attained by a proper selection of cases to be admitted, and by dismissing them as soon as they ought to give place to other sufferers. The general rule for the admission of cases is to prefer the most severe of those which admit of cure or relief by medical treatment; and this is exactly the description of cases in which the mortality is highest. Incurable cases are fitter for a poor-house than a medical hospital; and hence it is a rule in many of the latter, not to admit phthisical patients. When admitted, they increase the rate of mortality, but rather tend to diminish the absolute number of deaths, as they often linger for a great length of time, and thus lessen the number of patients received. Slight cases, unattended with danger, are generally unfit for hospital treatment, as they occupy beds which might be better employed. For these reasons, a high mortality may depend upon a proper selection of severe and dangerous cases, as well as upon improper management and unskilful treatment.

The records of public hospitals are also expected to give information concerning the frequency or rarity, increase or decrease, of the several diseases usually admitted; and the reports of different hospitals and dispensaries present us with lists of these diseases, and the number of patients affected with each. To perform

this part of the physician's duty judiciously is attended with great difficulty, not only on account of the imperfection of our nosological systems, but on account of the complication and indeterminate nature of deviations from health, so that every practitioner who has attempted it, knows well the difficulty, or rather the impossibility, of referring some cases, even although severe, to any recognized species of disease. Still, however, a register of diseases is of the greatest utility in giving information concerning the prevalence of the most important affections, especially those of an epidemic nature. It would be a great advantage, if some general classification could be adopted for all hospitals, and adhered to in all time to come, even although it were not the best possible. Were this the case, it should also be used as the basis of bills of mortality, and then we would be possessed of materials for determining the rise, height, and decline of each disease, and the effect of general causes upon their production and modification. Such a view is also necessary to enable us to know the share which each disease has in the mortality of the human race, at different times, and in different countries. The disease of each patient should be registered at the period of dismissal, as in our Hospital, and not at admission, for its nature can often be only determined by its progress. If a patient should labour under two distinct diseases not depending upon each other, both should be noted, more especially if, after being cur-

ed of his original complaint, or while in hospital, he should be attacked by a new disease,—a contagious fever, for example, or hospital gangrene.

In the general register the sex and age of each patient should be marked, as well as the profession and the alleged cause of the affection. Each of these particulars throws much light upon the predisposing and exciting causes of diseases, and may enable us to take measures to counteract them.

Another circumstance, seldom attended to, but occasionally of great importance, especially during epidemic diseases, is to mark down the exact place, and even house, where the patient resided when he was first affected with the disease, or before he came into the hospital. By this means we shall be sometimes able to trace the introduction of contagious diseases, their progress from one part of a town or country to another, and the limitation of others to particular districts.

It is, lastly, of great importance, in an economical, as well as a medical point of view, to register the number of days each patient remains in the hospital. Connected with the average rate of mortality, it furnishes a criterion for estimating the general success of the treatment; and it is almost indispensable to enable the managers and public to judge of the zeal and activity of the medical officers in not permitting the hospital to be abused by the lazy and worthless, and to compare the amount of benefit derived by society in proportion to the expenditure.

For the Clinical School of the University of Edinburgh two small wards are allotted upon the first floor of the wings of the Hospital, one for each sex. They have cross lights, and are paved with tiles. Each consists of a body having four windows and eight beds, and three corner closets, with a window and two beds in each, making 14 beds in each ward. A fourth closet is for the day nurse, who has a night nurse as an assistant. * There is one fire-place in the body of the women's ward, and a fire in the nurse's closet. In the men's ward there are fires in two of the closets, which, besides, are over the hot baths, and one in the nurse's closet. The doors open into staircases, and are always open. The bedsteads are of iron; the bedding good; the ventilation is free, sometimes excessive; and, upon the whole, the wards are as comfortable as their original construction will allow.

The professor in charge of the clinical wards has the choice of the patients admitted each day by the ordinary physicians of the hospital, and it is his object to have as great a variety of diseases under his care as possible, and to select of each the most severe and interesting examples. In this ward, therefore, there are both chronic and acute cases, and one-half of the body of each ward is appropriated to fevers, and divided from the rest by a

* Including the closets, they are 50 feet long, 26 wide, and about 11 high, for 15 beds, which amounts to a little more than 86.5 square feet of surface to each person, or 953.3 cubical feet.

wooden partition reaching more than half way to the ceiling, by which arrangement it was hoped to combine the advantage of a fever ward with sufficient ventilation. The beds are seldom allowed to remain empty above a day or two, and chronic cases are generally dismissed as soon as the nature of the affection has been sufficiently considered, and there is no particular advantage likely to arise to the patient from residence in an hospital.

In consequence of the indisposition of my father and of Dr Rutherford, I had the charge of the Clinical Wards during the latter period of the winter and summer courses of last season ; but in the following abstract, I include a report of the whole cases admitted during both quarters, that is, of the winter quarter commencing November 8th and ending January 31st, and of the summer quarter commencing May 6th and ending July 31st.

The whole number of cases admitted was,

		Men.	Women.	Total.
Winter quarter	-	46	38	84
Summer quarter	-	49	45	94

From the limited size of our wards, this statement does not allow us to draw any conclusion with regard to the liability of the different sexes to disease, as there were always more patients of each presented than we could admit, and we kept our wards nearly full.

If an hospital were sufficiently large to admit

all proper objects, then the numbers of each sex received might afford some result as to the influence of sex upon the frequency of disease. But even then we must not forget the influence of the customs, prejudices, and moral habits of each. A man who is not worn out seldom comes into an hospital for a slight complaint, while a married woman with a family will not come even for a very severe disease. On the contrary, unmarried women and old men, especially if they have been formerly in an hospital, and have acquired the habits of laziness and inactivity, make the slightest ailment a pretence for admission.

We next state the time of remaining in the hospital of each sex during each period.

Winter Quarter.			Summer Quarter.		
	No.	Average Days.	No.	Average Days.	
Men - -	46	$25\frac{1}{3}$	49	$20\frac{1}{4}$	
Women -	38	27	45	$20\frac{3}{4}$	

Number of each sex according to the weeks they remained in the house :—

	Winter Quarter.			Summer Quarter.			Grand Total.
	Men.	Women.	Total.	Men.	Women.	Total	
Under 7 days	8	4	12	8	6	14	26
— 14 —	8	6	14	11	11	22	36
— 21 —	5	4	9	15	15	30	39
— 28 —	7	9	16	4	8	12	28
— 35 —	6	6	12	6	2	8	20
— 42 —	7	6	13	2	2	4	17
— 47 —	3	0	3	2	3	7	10
Above 50	2	4	6	1	2	3	9

According to this view, the average time our patients remained was 23 or 24 days, and women remain a day or two longer than men. Com-

paring the two periods, it is evident that our patients during the summer quarter remained about six days less in the hospital than during the winter, which is of great importance in an economical point of view, as it shows that 26 patients were relieved during the summer at the same expence as 20 during the winter. The difference of residence may arise either from a difference in the severity, or rather obstinacy, of the diseases during the respective periods, or from greater skill and attention on the part of the practitioners. Although our averages may serve for comparison with other institutions of a similar nature and under similar circumstances, they are not to be compared with the average of permanent hospitals in full operation, because not only is the period during which the clinical wards are open much too short, but we receive them empty, and we endeavour to leave them empty. A comparison against the whole house or other establishments can only be made fairly by considering the length of residence in the hospital of those patients regularly dismissed during a given period, without regard to their date of admission. Thus, although a patient should be dismissed soon after the period has commenced, he is to be considered as belonging to that period, and the days he has remained in hospital are to be reckoned to it; while, on the other hand, although a patient has been in during the greater part of a

period, he is not to be considered as belonging to it, nor his days of residence added to it, unless he have been actually dismissed before it be concluded. In this respect we shall consider the patients actually dismissed by us.

Winter Quarter.				Summer Quarter.			
			Days.				Days.
Men	-	41	26	37		18.4	
Women	-	32	28 $\frac{2}{3}$	14		19.1	

This presents a still greater difference between our summer and winter quarters, and we shall find that it was owing to the nature of the cases we were obliged to leave undismitted.

Winter Quarter.				Summer Quarter.			
			Days.				Days.
Men	-	6	16.5	12		26	
Women	-	5	19.	11		26	

In these cases, the time of remaining in hospital is reversed, and is to be accounted for by the circumstance, that a fever hospital was established in Edinburgh after the winter period terminated, and before the summer commenced; and hence in summer a greater number of chronic cases was received than in winter, and those that were interesting were retained longer.

The general average of deaths is next to be considered.

Winter Quarter.				Summer Quarter.				Total.			
			No. Died. One in				No. Died. One in				No. Died. One in
Men,	46	5	9 $\frac{1}{3}$	49	3	16 $\frac{1}{3}$	95	8	11 $\frac{7}{8}$		
Women,	38	4	9 $\frac{1}{2}$	45	2	22 $\frac{1}{2}$	83	6	13 $\frac{5}{7}$		
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	84	9	9 $\frac{5}{6}$	94	5	18 $\frac{2}{3}$	178	14	12		

Strictly we should have considered only the patients whose cases terminated during the times our wards were open, but as none of the patients we left died in the hospital, and as we did not receive any convalescents in our wards when the periods began, we are entitled to compare our deaths with the total number of patients admitted. At any rate, the difference of mortality between the winter and summer quarters is very striking, being very nearly as two to one. But this may be merely accidental, for, unless the number of patients be very large, the results are very often singular and unexpected. Thus weeks shall elapse without a death, and then several happen together, after which a fortunate period shall follow.

We shall next consider the patients according to the diseases with which they were afflicted, and here we shall follow Dr Cullen's nosology, except in regard to the cutaneous affections, when we take Dr Willan for our guide.

Intermittent fevers are rarely seen in this place, being scarcely ever generated, and not very frequently imported. During the winter we had one, and in summer three, all very slight.

	Profession.	Age.	Adm.	Dism.	Event.	Time.
No. 1,	A. M'L.	Labourer	32	27 Jan.	1 Feb.	cured 6 days.
2,	R. K.	Weaver	19,	15 May,	27 May,	cured 12
3,	D. D.	Labourer	34,	22 May,	15 June,	cured 23.
4,	D. M'B.	Invalid	40,	25 June,	1 July,	cured 7

The whole patients were men, who had been out of Scotland, and, except among reapers who

go to England, we never see a female affected with intermittent.

No. 1. had had a severe quotidian, ten years ago, of nine months duration, and five weeks ago it returned with the same type, and he had a daily fit of two hours, commencing at 11 A. M. except for the two days before admission. In the case-book I find no mention of the cause of his first illness.

No. 2. was a native of a fenny part of Lancashire, but was first affected in Glasgow, 18 weeks after leaving home for want of employment. No. 3. had been affected with intermittent at Chatham, 4 years before, and No. 4. had had it severely at Walcheren in 1809.

No. 1. was cured, without the aid of medicine, by the mere comforts of the Hospital, and had no paroxysm after admission. No. 2. got only laxatives and antimonial diaphoretics. No. 3. was a more severe case, and was successfully treated by laxatives, a blister to the nape of the neck on May 23d, and Pulv. rhœi et Mist. cinchon. June 6. No. 4. yielded at once to Fowler's solution.

The following tables shew the circumstances of the cases of continued fever which occurred in our wards.

Cases of Fever in Men in November and December 1817, and January 1818.

Name.	A.	Profession.	Cause.	Began.	Admitted.	Crisis.	Dism.	Days.	Event.
J. S.	16		Contagion	Nov. 6	Nov. 8	Nov. 18	D. 13	36	Cured
M. G.	40	Labourer	Wet	Nov. 4	Nov. 8		N. 16	9	do.
J. A.	24	Weaver	Contagion	Nov. 3	Nov. 8	Nov. 16		—	
			Relapse	Nov. 20		Dec. 4		—	
			Relapse	Dec. 5		Dec. 11	D. 25	48	do.
M. G.	44	Labourer	Unknown	Nov. 3	Nov. 8	Nov. 17	D. 20	41	do.
W. K.	30	Porter	Cold & intemp.	Nov. 3	Nov. 10	Dec. 16	D. 8	29	do.
MM'D.	45	Porter	Cold & fatigue	3 wks. b.	Nov. 11	Nov. 11	N. 25	15	do.
G. S.	8		Contagion	Nov. 7	Nov. 12	Nov. 17	D. 13	32	do.
J. S.	5		Contagion	Nov. 4	Nov. 12	Nov. 17	D. 13	32	do.
J. R.	41	Mason	Fatigue & cold	14 days b.	Nov. 13	Nov. 10	D. 22	41	do.
M. S.	58	Labourer	Unknown	Nov. 2	Nov. 13	Nov. 15	N. 24	12	do.
M. B.	43	Wright	Unknown	14 days b.	Nov. 26	Nov. 27	N. 28	3	do.
M. W.	53	Shoemaker	Cold	14 days b.	Dec. 5	Dec. 21	Jy. 10	37	do.
M. A.	50	Saddler	Unknown	Dec. 6	Dec. 11	Dec. 20	J. 12	33	do.
M. A.	25	Servant	Contagion	Dec. 2	Dec. 11	Dec. 18	J. 5	26	do.
W. R.	35	Labourer	Cold & wet	14 d. b.	Dec. 14	Dec. 16	J. 6	24	do.
W. T.	32	Tailor	Unknown	8 d. b.	Dec. 15	Dec. 26	J. 26	43	do.
J. F.	26	Policeman	Relapse		Dec. 16	Dec. 29	J. 20	36	do.

Notes to Fever Cases according to their Numbers.

- Brother to No. 7 and 8. Mother died three weeks before of fever. Case simple, but sized. Pectoral after the 15th November. Treatment, purgatives and afterwards wine.
- Case cephalic, slight. Conv. regular. Treat. laxat. tepid washing.
- Case anomalous, cephalic. P. slow; h. moderate. Conv. slow, irregular; obstinate. Headach; rigors 25th and 26th Nov.—Treat. arteriot. 3vi. Nov. 10.—Blisters, issues, tonics, laxatives. Hirud. xii. capiti, Dec. 10.
- Convalescent on admission.
- Incoherent delirium. Arteriot. 3vi. Vin. rubr. 3viii. Nov. 11.—Arter. 3vi. Nov. 12.
- Slight pectoral. Treat. Anod. demulcents.
- and 8. Brothers to No. 1. Cases simple. Conv. regular. Treat. laxatives.
- Convalescent from fever on adm., but a large abscess formed on the right side of the max; opened 20th Nov.—Treat. venesect. purgatives, antiphlog.
- Pectoral, with sore throat; slight. Conv. regular. Treat. blister, demulcents.
- Convalescent on admission.
- Fever low; cough and dysentery.
- Father of No. 14. On admission stated that he knew no cause for his disease; but on inquiry, fever had been in the family for eleven weeks. Fever severe, cephalic; vomiting and actual singultus. P. frequent, full; temp. high; thirst intense. V. S. 3x. Dec. 12. 3viii. Dec. 15.—3x. Jan. 6.—Calomel. antim. saline purg.
- Son to No. 13. Servant in an opulent family in the country, where there was no fever assigned no cause, but had visited his father a fortnight before, in whose house fever. Headach; cough; p. frequent, full. Bled before admitt. Hirud. vi. capiti, Dec. 16. 3vi. Dec. 18.—Purgatives.
- From Shoemakers' Close, Canongate, where fever has been very common. Severe pain in the back of the neck and head, and afterwards of right side, with cough. Hirud. vi. temp. Dec.—Vesicat. nuchæ, 20th Dec.—Sinap. coll. 21st Dec.—V. S. 3x. 24th Dec.—Vesicat. pect. Jan. 1st.
- From Blackfriars' Wynd, where he knows of no fever existing. Cephalic, pectoral; trismus first low and muttering; then high, succeeded by sopor. V. S. 3viii. 16th Dec. Treat. frigid. Vesicat. Purgatives.
- Delirium, Dec. 20.—Maniacal, Dec. 22.—Mind collected, Dec. 30.—Calom. antim. Dec. 31.—Vin. 3vi. Dec. 21.—Ol. tereb. 3i. Dec. 22.—Headach; hirud. viii. temp.—Intr. vin. Jan. 1. V. S. 3xii. Jan. 4.—Vesicat. cap. Jan. 6.—Periodical headach; arsen. potass. Jan. 12. Vesicat. pone aurem sinistram, Jan. 16. Case, Appendix, No. IX.

N ^o	Name	A.	Profession.	Cause.	Began.	Admitted.	Crisis.	Dism.	Days.	Ev.
18	A. B.	22	Farm servt.	Cold & fatigue	12 d. b.	Dec. 22	Dec. 30	Fe. 1	41	d
19	D. D.	34	Seaman	Contagion	Dec. 24	Dec. 30	Jan. 2			
				Relapse	Jan. 9		Jan. 25	Left		
20	J. L.	53	Shoemaker	Cold & wet	Dec. 28	Dec. 31	Jan. 2		3	Di
21	R. C.	35	Servant	Cold & wet	Dec. 25	Jan. 2	Jan. 9	J. 15	14	Cu
22	A. C.	17	Seaman	Cold & wet	8 d. b.	Jan. 4	Jan. 12	J. 18	15	d
23	J. M ^c E	22	Labourer	Unknown	8 d. b.	Jan. 12	Jan. 13	J. 17	5	d
24	P. H.	29	Shipwright	Contagion	Jan. 5	Jan. 13	Jan. 19	F. 1	20	d
25	J. M ^c L	26	Labourer	Contagion	Jan. 2	Jan. 16	Jan. 18	F. 1	15	d
26	J. M.	23	Labourer	Contagion	Jan. 15	Jan. 18	Jan. 21	Left		d
27	W. B.	18	Servant	Contagion	Jan. 17	Jan. 20		Left		d
28	J. C.	36	Brewer	Contagion	Jan. 27			Left		d

Cases of Fever in Women in November and December 1817, and in January 1818.

29	J. S.	13		Unknown	Nov. 1	Nov. 8	Nov. 11	D. 1	24	Cu
30	W. F.	45		Unknown	Oct. 31	Nov. 8	Nov. 13	D. 11	34	de
31	M. F.	48		Unknown	Oct. 30	Nov. 8	Nov. 12	D. 2	25	Des
32	S. M ^c F.	20		Cold and wet	Oct. 25?	Nov. 8	Nov. 9?	D. 15	38	Cu

18. Brother to No. 27. Violent delirium, requiring restraint on admission. Eruption of ecthymata on Jan. 5, and lichen on Jan. 12, during convalescence.—V. S. 3xii. before admission.—V. S. 3xii. Solut. antim. Vesic. capiti, Dec. 23.—Vin. 3ss. omn. hora, Dec. 25.—Pulv. camph. Dec. 27.—Vin. 3iv. indies, Dec. 29.

19. Severe gastric. P. nat.—Emet. Dec. 31. V. S. 3xii. Jan. 1.—Eruption on ears and wrists, Jan. 4.—Rigor and vomiting, Jan. 9.—Accession of fever 15th Jan. with much flatulence, and sopor followed by debility. Wine hurtful 14th, 17th.—V. S. 3xiv. Jan. 20.—Wine beneficial, Jan. 22.—Eruption of lichen simplex, Jan. 31.

20. Pulmonic typhus, fatal. Great difficulty of breathing, insensibility. Hirud. viii. temp. sol. salina, Dec. 30.—Sulph. zinci.—vesicat.—pect. enem. purg. Jan. 1.

21. Pulmonic typhus, with hæmaturia. Convalescence regular. Vesicat. Jan. 2.—V. S. 3viii. Jan. 4. Case, Appendix, No. VIII.

22. Cephalic and pulmonic; sopor. Conv. regular. V. S. 3x. Jan. 4. Vesicat. sterno, Jan. 5.

23. Slight case.

24. Severe affection of fauces resembling angina maligna and erythematic eruption. Convalescence regular. V. S. 3xv. 13th Jan.—Vesicat. coll. 14th Jan.—Porter.

25. Severe case. Cephalic, much benefited by V. S. in a late stage of the disease.—V. S. 3x. Jan. 16.—V. S. 3xii. Jan. 17. Case, Appendix, No. VI.

26. Severe case, pulmonic. From Shoemakers' Close; had visited his mother in fever in the Hospital. V. S. 3xii., but fainted when 3vi. were taken. 18th Jan.—V. S. 3xii. vesicat. pect. 19th Jan.—Vesicat. pect. 22d Jan.—Relapse. Headach, V. S. 3xviii. 31st Jan.—Vesicat. pect. 1st Feb.—Decided crisis, Feb. 17.—Dismissed cured, March 2.

27. Brother to No. 18. Another brother and mother also infected; mother died. Pulmonic, cephalic, gastric. Without very great pain of chest, the breathing was irregularly performed, as if, from indolence, the muscles were about to suspend their action. Sopor, V. S. 3xii. Blood flowed very black and viscid, and coagulated as it touched the cup, Jan. 21.—V. S. 3xii. Blood more fluid, slightly buffy. Vesicat. pect. Emet. Jan. 22.—Vesicat. sterno. Jan. 24.—Relapsed, Feb. 18.—Decided crisis, Feb. 21.—Cured.

28. Affected while in Hospital for disease of the heart. Very frequently bled before the accession of fever.—V. S. 3xii. Jan. 27.—Convalescent, Feb. 5. Case, No. I. Appendix.

29. Case simple. Convalescence regular. Laxatives. Mist. cinchon.

30. Pulmonic, seemed convalescent until Nov. 14, when she eat meat at dinner greedily, and on the 16th accession of fever, with severe rheumatic pains of her joints. Treated with pulv. ipecac. et opii. Pil. calomel. et opii. Pulv. cinchon.

31. Pulmonic, dysenteric. Was bled before admission. Pulv. ipecac. Mist. sal. diaph. Steak. Pil. rhœi. Tinct. Bonpland. Pil. theb. Phos. sod. Mist. catech. theb. Cough. Nov. 27.—Troch. Glyc. cum lactuc. Went home very ill, and died two days afterwards.

32. Pulmonic. Convalescent. Vomiting and diarrhœa, Nov. 18.

Name.	A. Profession.	Cause.	Began.	Admitted.	Crisis.	Dism. Days.	Event.
33A.M	G26	Contagion	Nov. 5	Nov. 10	Nov. 14	—	
		Relapse	Nov. 20		Nov. 26	D. 1	—
		Relapse	Dec. 3	Dec. 6	Dec. 9	D. 18	39 Cured
44 G. G.	26	Relapse	Nov. 2	Nov. 10	Nov. 16	D. 8	29 do.
55 A. D.	18 Unmarried	Unknown	Nov. 10	Nov. 12	Nov. 17	—	
		Relapse	Nov. 25		Dec. 1	—	
		Relapse	Dec. 8		Dec. 14	D. 22	41 do.
66 M. M.	24 Servant	Contagion	Dec. 7	Nov. 12	Nov. 21	J. 7	57 do.
77 M. H.	21	Cold and wet	Nov. 9	Nov. 22	Dec. 1	D. 13	22 do.
88 H. S.	29 Wet nurse	Unknown	Nov. 14?	Nov. 26		D. 17	22 do.
99 A. W.	25	Unknown	Nov. 26	Nov. 27		D. 1	4 do.
00 J. D.	22	Contagion	Dec. 1	Dec. 4	Dec. 16	J. 27	23 do.
11 M. M.	33 Hos. nurse	Contagion	Dec. 3	Dec. 11	Dec. 14	D. 29	19 do.
22 M. D.	25 Married	Unknown	Dec. 4	Dec. 13	Dec. 16	D. 22	10 do.
33 R. F.	69	Contagion	Dec. 1	Dec. 16		J. 1	16 Died
44 J. S.	25	Cold and wet	Dec. 10	Dec. 18	Dec. 24	J. 17	31 Cured
55 B. H.	24	Cold and wet	Dec. 9	Dec. 18	Dec. 23	—	
		Relapse	Jan. 20?		Dec. 24	J. 26	40 do.

333. Pulmonic. Before admission seven cupfuls of blood taken from the arm on Nov. 9th, which relieved the headach for a short time. Catam. flowed on admission, and continued on Nov. 15. Mist. muc. anod.

1st Relapse, retching, cough, sweating. Pulv. ipecac. Mist. salin. diaph. Mist. muc. acid. anod. Catam. reappeared Nov. 27, and ceased next day. Dismissed apparently well, Dec. 1.

2d Relapse, returned Dec. 6. Severely affected with fever, sickness, and cough, continuing Dec. 13. Mist. muc. acid. anod. Vesic. pectori.

334. A relapse. Had been dismissed convalescent from fever 14 days before, but was immediately exposed to cold and wet, and relapsed. Was not confined to bed till Nov. 2d. Pulmonic, Gastric. Diarrhoea for several days after Nov. 21. Mist. muc. acid. anod. Haust. anod. Mist. catechu.

335. Catam. on admission to Nov. 18. Agrypnia. Haust. anod.

1st Relapse, fever, rheumatic pains, vomiting. Pil. theb. Mist. mucil. acid.

2d Relapse, fever, nausea, headach, and rheumatic pains. Pulv. ipecac. Mist. salin. ammon. Lav. capitis frigida. Haust. anod. Convalescence slow with tremor.

336. Cephalic, Gastric. Pulv. ipecac. Haust. anod. Solutio emetica. Arter. 5vi. Nov. 18. Equelae epigastric, distention, palpitations, pain of breast. Pil. hyd. V. S. 3xiii. Jan. 1. Hirud. 3xii. epigast. Jan. 3.

337. Cephalic, Pulmonic, Arter. 5vi. Nov. 23. Haust. anod.—Delirium. Arter. 5vi. Nov. 24. Convalescence regular.

338. Very slight, convalescent.

339. Very slight.

440. Fever moderate. Convalescence slow and interrupted. Pain of head, back, and right side. Bled before admission. Pulv. ipecac. Haust. anod. saline purgatives. Lav. cap. frigid.—Pain of breast. Vesicat. pect. Dec. 25.—Pil. hydrarg. Dec. 28. obstinate pain of epigast. V. S. 3viii. Nov. 31.—V. S. 3viii. Jan. 1.—Cucurb. cruent. epigastrio, Jan. 7.—Vesicat. epigast. Jan. 11.

441. Night nurse of women's clinical ward. Pain of head and spine, V. S. 3viii. Dec. 12. Convalescence regular.

442. Gastric moderate. Sol. salin. ant. Enem. domest.

443. Petechial, gastric, V. S. 3iv. Dec. 28.—Convalescent 26.—Fetid and fatal diarrhoea 28. died 2d January. Case, Appendix, No. XIV.

444. Cephalic, gastric. Pulv. ipecac. V. S. 3viii. Dec. 19.—Pulv. antim. Lav. cap. frigid. Vesicat. cap.—Convalescent Dec. 26. Left parotid swelled, Jan. 1; right Jan. 2. and each continued affected two days.

445. Severe. Cephalic, gastric, muttering delirium, coma, cutaneous efflorescence. Hirud. vi. temp. Dec. 19.—Lav. frigid. Vesicat. cap. Dec. 22.—Remission, Dec. 23.—Lichen simplex. Jan. 1.—Relapse, pulmonic, gastric. Pulv. ipecac. Jan. 20.—Sol. salin. antim. Jan. 22.—Hirud. vi. temp. Jan. 23.

N. Name.	A. Profession.	Cause.	Began.	Admitted.	Crisis.	Dism.	Days.	Event.
46 J. M. N. 46		Contagion	Dec. 14	Dec. 22	Dec. 26	J. 22	32	Cured
47 J. S. 34		Cold and wet	8 wks b.	Dec. 22	Dec. 27	F. 1	43	do.
48 A. H. 20		Relapse	8 days b.	Dec. 31	Jan. 4	Left		do.
49 H. W. 16		Unknown	9 days b.	Jan. 3	Jan. 13		11	Died
50 C. M. G. 28		Cold	14 days b.	Jan. 8		J. 30	32	Cured
51 N. B. 28		Cold and wet	14 days b.	Jan. 9		J. 18	8	do.
52 J. B. 18		Contagion	Jan. 10		Jan. 23	Left		do.
53 M. B. 21		Contagion	Jan. 3	Jan. 14	Jan. 18			do.
		Relapse	Jan. 29			Left		do.
54 M. H. 21		Contagion	Jan. 14	Jan. 20	Feb. 1	Left		do.
55 B. S. 33		Contagion	Jan. 21	Jan. 29		Left		do.
56 A. S. 21		Contagion	Jan. 21	Jan. 29		Left		do.

Cases of Fever in Men in May, June, and July 1818.

57 W. C. 18	Seaman	Cold & fat.	6 days b.	May 8	May 18	Jun. 8	32	Cured
58 W. B. 60		Contagion	8 days b.	May 10	May 15			
		Relapse	Mar. 25			J. 21	41	Died
59 J. M. C. 27	Labourer	Unknown	9 days b.	May 11	May 20	J. 15	34	Cured
60 J. M. G. 52		Unknown	6 days b.	May 20		M. 27	8	do.
61 J. O. 28	Labourer	Contagion	5 days b.	May 21	June 4	J. 29	38	do.
62 J. H. 49	Policeman	Unknown	10 days b.	June 3		J. 25	23	do.
63 A. M. 32	Carter	Unknown	10 days b.	June 4	June 13	J. 20	17	do.

46. Cephalic, pulmonic, V. S. \bar{v} iii. Dec. 23. Buffy crust one-fourth inch thick. Vesica capiti, Dec. 24. Convalescence slow. Eruption of lichen simplex, Jan. 8. Sulphuret. potas Vin.

47. Attributes her complaints to cold when reaping. Fever irregular, remittent, gastritis said to be of eight weeks standing. Pulse very quick, intermitting. Delirium, Dec. 31. Emet. Pulv. diaph. Vin. Op. Arsenic. Calomel. Sequelæ, boils.

48. Dismissed from the hospital convalescent from fever about a fortnight before, and ascribes her relapse to having got her feet wet the day after she went out. Cephalic, pulmonic knees and ankles painful and very weak. Progress of disease irregular, and convalescence slow. V. S. \bar{v} xii. Jan. 1. Blood very buffy. Dismissed cured, Feb. 9.

49. Violent and fatal case, more resembling those which occur in private practice among the higher classes of society. Menstruation profuse, Jan. 6. Case, No. XIII. Appendix.

50. An Albiness. Case slight.

51. Case slight, gastric, V. S. \bar{v} xii. Jan. 10.

52. Patient attacked while in the house for tympanites. See case, No. II. Appendix.

53. Very complicated case; obstinate vomiting; and after the fever declined, pain and loss of power of legs; pain under sternum. Lavatio frigida. Emet. Mist. salin. ammon. Haust. anod. Vin. rubr. Relapse, Jan. 29; crisis, Feb. 18; relapse, March 1; crisis March 4. Dismissed cured, March 12.

54. Cephalic, rheumatic, pulmonic, low delirium. V. S. \bar{v} xviii. Jan. 20. Vesic. sterno Dismissed cured, Feb. 26.

55. Cephalic, petechial. V. S. \bar{v} xx. Jan. 30. Crisis, Feb. 4. Dismissed cured, Feb. 21

56. Cephalic. abdominal. V. S. \bar{v} xvi. Jan. 29. Vesicat. pectori, Jan. 31. Vin. rubr. Crisis, Feb. 6. Dismissed cured, Feb. 13.

57. Cephalic. Pain of head and upper part of neck. Vesic. nuchæ. Mist. salin. ammon. Convalescence regular.

58. Icteric. See case, No. XV. Appendix.

59. Cephalic, relieved by spontaneous epistaxis, May 12. Laxant. salina. Mist. salin. ammon. Pulv. Rhœi. Critical diarrhœa. Convalescence regular.

60. Slight case. Diarrhœa. Mist. salin. ammon. Pulv. Rhœi. Haust. anod. antim.

61. Severe on admission, immediately remitting, but about the 29th he suffered a fresh accession of high fever, relieved by a critical perspiration during the night of June 3d.

62. Maniacal. Hirud. iii. front. before admission.—Epispast. ii. temp. Jalap. cum calom. June 3d.—Hirud. viii. capit. June 5.—Art. \bar{v} xx. June 7.—Hirud. capit. June 10.—Hæmorrhagy from temporal artery. June 16.—Hæmorrhagy with relief, June 21 and 22.

63. Gastric, sore throat, sweating. Pulv. Rhœi. Mist. diaph. salin. Haust. anod. Acid. sulph.

N.	Name.	A.	Profession.	Cause.	Began.	Admitted.	Crisis.	Dism.	Days.	Event.
664	J. M.	15		Heat & fat.	7 days b.	June 13	June 20		25	Cured
665	J. A.	30	Wright	Wet & exhaus.	10 days b.	June 14	June 18	July 8	5	Died
666	D. O.	20	Shoemaker	Unknown	6 days b.	June 16	June 26		11	do.
667	A. J.	14	Upholsterer	Heat & fat.	8 days b.	June 21		J. 25	6	Cured
668	W. C.	29	Corkcutter	Fatigue		June 23	June 28	Jy. 10	18	do.
669	C. J.	17	Baker	Unknown	3 days b.	June 30	July 21	Jy. 29	31	do.
770	D. C.	21	Labourer	Unknown	5 days b.	July 2		July 8	7	do.
771	J. R.	22	Labourer	Unknown	7 days b.	July 4	July 14	Jy. 27	24	do.
772	J. C.	23	Ostler	Unknown	5 days b.	July 9	July 12	Jy. 16	8	do.
773	D. W.	20	Joiner	Contagion	10 days b.	July 11	July 14	Jy. 15	6	do.
774	A. J.	18	Weaver	Contagion	5 days b.	July 13	July 25	Left		
775	J. W.	24	Seaman	Distress	9 days b.	July 13	July 17	Jy. 29	17	do.

Cases of Fever in Women in May, June, and July 1818.

776	J. A.	56		Unknown	10 days b.	May 7		Jun. 1	27	Cured
777	A. H.	27	Shoebinder	Contagion	8 days b.	May 9	May 12	M. 26	17	do.

64. Had fever six months before.—Cephalic, pulmonic. Episp. pect. Vap. aq. tepid. Lav. tepid. Mist. mucil. Hirud. vi. capit. June 19. Hirud. xii. temp. July 6.

65. See case, No. XI. Appendix.

66. See case, No. XII. Appendix.

67. Slight. Laxatives.

68. Patient confused, and unable to give a distinct account of himself on admission. Hirud. vi. temp. June 23. Lavatio capit. frigid. Convalescence regular.

69. Cephalic. Case of considerable severity, and in some respects anomalous. Without great quickness of pulse; the temperature of his skin remained long very high, and his muscular strength was so little affected, that during the second week of the fever he voluntarily went to walk in the airing ground every second day, and although remarkably listless, and with a hot surface, he was much disposed to be out of bed and dressed. His appetite was also excessive during the existence of the disease.

The following is the state of his pulse and heat on each day of the disease.

Days,	3	4	5	6	7	8	9	10	11	12	13	16	17	18	19	20	21	22	23	24	25	26
Pulse,	100	82	92	92	78	82	80	90	74	80	80	104	74	112	94	100	100	92	90	92	88	
Heat,	105	104	104	102½	101½	102	101	104	100	100	101	100	101	101	101	102	103	102	102			

He got an emetic on admission. Cucurb. cruent. nuchæ. 3xii. July 1. Intolerance of light relieved by Hirud. viii. temp. July 13. On the evening of the 20th day of his fever there was a considerable accession. Pulse rose to 100, and heat to 104, but the headach was relieved by hirud. xii. temp.

70. Cephalic, pulmonic. Bled before admission. Relieved by cupping, July 3d.

71. This man was brought to the hospital from the police prison, where he had been confined for three weeks on bread and water, and where at that time there was no fever. It was a marked case of what might be called low nervous fever, with great depression, hot, but pale skin and squalid appearance. He got speedily well with cold washing and free air, almost without medicines.

72. Petechial fever, with yellowness of skin. Hirud. xii. July 4. V. S. 3xii. July 10. Purgantia. Case, Appendix, No. IV.

73. Was admitted on the 11th day when the fever was already declining, but the temperature of his skin was still 104, and continued as high till a day or two before he left the hospital. The whole treatment consisted in shaving the head, an enema, and tepid pediluvium.

74. Is detailed in the Appendix, No. III. as an example of our summer fever.

75. Cephalic, great increase of temperature. Lavatio frigida. Hirud. xii. temp. July 5. Pediluv. tepid. V. S. 3x. with great benefit, July 13. Convalescence good.

76. Pulmonic. Ten months before, this woman had been long in Infirmary for fever. Laxantia. Emollientia.

77. Gastric. Enem. Pulv. ipecac.

N.	Name.	A.	Profession.	Cause.	Began.	Admitted.	Crisis.	Dism.	Days.	Event.
78	H. B.	38	Servant	Unknown	14 days b.	May 12	May 19	J. 18	37	Cured
79	M. W.	22	Strawplait.	Contagion	6 days b.	May 12	May 17	J. 2	21	do.
80	J. D.	24	Out-servt.	Contagion	10 days b.	May 13	May 21	J. 8	26	do.
81	M. M.	L36		Unknown	6 days b.	May 13	May 29	J. 25	43	do.
82	C. R.	14	Servant	Contagion	5 days b.	May 19	May 26	J. 4	16	do.
83	G. J.	45	Married	Unknown	11 days b.	May 23	May 28	J. 18	27	do.
84	J. W.	26	Servant	Unknown	3 days b.	May 27	June 2	J. 4	8	do.
85	J. M.	J. 28	Servant	Unknown	10 days b.	June 4	June 10	J. 16	12	do.
86	J. H.	23	Servant	Relapse	6 days b.	June 10	June 19	Left		
87	E. C.	22	Servant	Unknown	5 days b.	June 20		Jy. 11	21	do.
88	M. T.	25	Servant	Unknown	2 days b.	June 27	July 2	J. 8	11	do.
89	M. S.	31	Married	Intemp.	3 days b.	July 2	July 8		66	Died

78. Low delirium. Mist. salin. ammon.—Pulmonic complaints supervened. Cucurb. cruent. Vesicat. pect. May 28. Acid. sulph. Episp. pect. June 1st. Inhal. vap. aq. V. S. 3vi. June 4.

79. Cephalic, had formerly a nephritic affection, and her catam. which had been suspended for three months, returned three days before her fever was observed. Pulv. ipecac. Vesic. nuchæ, May 15th. On the decline of her fever, her nephritic complaints returned.

80. Cephalic, pulmonic. Slept nine weeks before admission with a girl with fever, since which she has never been thoroughly well. Vesicat. nuchæ, May 18.

81. Cephalic, pulmonic, gastric, et enteritic. Bled before admission. V. S. 3viii. May 14. V. S. 3viii. May 15. Haust. efferv. Vesicat. sterno, May 30. Inhal. vapor. aquae, June 2d. Episp. lateri, June 4. Ascarides, gastric symptoms. Convalescence slow and irregular.

82. Cephalic. Purgant. Vesic. nuchæ. Mist. salin. ammon.

83. Severe case. Had experienced a similar attack a year ago. Vin. 3iv. indies, May 24. Cough. Mist. Mucil. Haust. anod. ant. May 29. Great deafness caused by swelling of the parotid glands.

84. Case moderate.

85. Cephalic, pulmonic. Almost convalescent when admitted. Pot. acid. veget.

86. This woman had only been dismissed a week after having been many weeks in hospital with protracted fever, her present attack was also severe, and general. Her head, lungs, and stomach being all greatly affected, and after the fever had subsided she remained confined to bed with obstinate headach, pain of side, vomiting, and an almost paralytic rheumatism of her legs.

87. Cephalic, abdominal, with yellowness of skin. Had yellowness of skin for three or four years after jaundice, but not for five or six years past. V. S. 3xviii. June 27. Catam. adsunt. June 25. Hirud. xii. temp. June 30. Cal. et opium.

88. Cephalic. Had a severe wound of the head eight months ago. Cucurb. cruent. nuchæ, 3xvi. June 22. Hirud. vi. fronti. June 23. V. S. 3xii. June 25. Cuc. cruent. 3xviii. pect. June 27. Emet. June 29. Arter. 3xii. July 1, with frequent purgatives. Case, Appendix, No. V.

89. Fatal and altogether anomalous. Case, Appendix, No. X.

In drawing conclusions from these tables it must be remembered, that during the winter months there was no fever hospital, the number of fever cases which presented themselves was therefore very great, and of them we had our choice ; while during the summer months, most of the pure fevers were sent at once to Queensberry House, and we had comparatively few cases, and those rather anomalous, in our choice. We admitted a larger proportion of fever cases in winter than in summer ; and it has been generally stated, that the continued fever of this country declines or becomes less frequent during summer, but our experience during this epidemic does not confirm this. For although the number of fevers has frequently fluctuated, yet no regular declension or increase of the epidemic has been observed, and the fever has prevailed as much during a summer of almost tropical heat, as during a raw and cold winter, and in both seasons its character as referable to typhus or synochus was nearly alike.

It affects both sexes in nearly equal numbers, and if we were to judge from our patients, in nearly an equal degree, as to danger ; but this is not general, for very few women comparatively die of our fever.

Our epidemic fever affected few individuals of a better class of society ; but when it did, it was, as also observed in other places, more severe and dangerous. The conclusion from this fact is, that the higher classes were either less exposed to the exciting causes, or were more able to resist their

operation, but that when it took effect, its action was more violent. The danger was evidently increased by the occurrence of the fever, in a system capable of great reaction, while in the debilitated and depressed bodies of the poor, it run its period with comparatively little tumult.

In the column allotted for the names of the patients, I have thought it sufficient to insert the initials for the sake of reference, and to spare room.

The next column expresses the ages of our patients, and we had them from 5 to 69, but they are particularly stated in the following abstract.

	Winter.			Summer.			Total.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Under 10 years,	2	0	2	0	0	0	2	0	2
20	3	4	7	5	1	16	8	5	13
30	8	17	26	9	8	17	17	26	43
40	6	3	9	2	3	5	8	6	14
50	5	3	8	0	1	1	5	4	9
60	3	0	3	1	1	2	4	1	5
60 and upwards,	0	1	1	1	0	1	1	1	2
Average, . .	32	27 $\frac{1}{2}$	29 $\frac{3}{4}$	26 $\frac{1}{9}$	29 $\frac{1}{4}$	27 $\frac{3}{4}$	30 $\frac{2}{3}$	28 $\frac{1}{4}$	29

This in itself furnishes no result as to the age most subject to fever, as it is perhaps merely the average age of hospital patients. To ascertain this, we may compare it with the average age of the patients affected with other diseases.

	Winter.		Summer.		Total.	
	No.					
Women,	11	24 $\frac{2}{3}$	31	19 $\frac{2}{3}$	42	20 $\frac{1}{2}$
Men,	18	34	31	40 $\frac{1}{2}$	49	38
	29	30 $\frac{1}{4}$	62	30 $\frac{1}{6}$	91	30

From this we may conclude, that the average

ages of fever patients of both sexes, does not differ materially from that of other patients, but that of other diseases the male patients were considerably farther advanced in life than the female.

The third column contains the profession or occupation of the patient. I should not have had to regret that this is so incomplete, if, instead of adding this circumstance from the case books, in which it was often omitted, from its not seeming at the time to be of importance sufficient to be recorded, we had made our entries into blank schemes, while the patients were still in our wards. In regard to the women, in particular, our books furnish little information; but it would be desirable to know of them whether they were married or single, whether their occupation was sedentary or active, in confined apartments or in the open air, and whether the servants were in place or out of place.

A fourth column should be allotted for the residence of the patient, especially during the prevalence of epidemic and contagious diseases, and in a fever hospital it should never be omitted. It should form a record by which we might trace with certainty the commencement and introduction of such diseases, their progress, and their decline; their favourite haunts, if we may use the expression, and should furnish the magistracy and police with information by which they may be enabled to take measures to prevent the introduction, or at least to counteract the diffusion of contagious diseases, such as small-pox.

The next column contains the cause to which each patient ascribed his disease. This of course cannot be always correct, but it shows the opinions of the people in regard to the production of fever, rather than the true cause, and in many cases we find them ascribing their fever to cold and fatigue, when they had been fully exposed to the operation of contagion, while in other cases contagion is given as the cause, while it may have arisen from other hurtful agents. This is not a place to enter into any disquisition concerning the contagious nature of our epidemic fever, which I consider as being fully established by universal experience. We had instances of several members of a family, sometimes the whole, coming in in succession, Nos. 1, 7, and 8; of a father and a son, although residing in different places and leading a very different life, as in Nos. 13 and 14, where the former is an Edinburgh saddler, and the latter a footman in a family of rank in the country; of one of our night-nurses becoming a patient with fever, No. 41, and of two of our patients for other diseases, being attacked with fever while in our wards, Nos. 28 and 52. At the same time, it does not follow that any person seized with fever, who has been exposed to contagion, derives his disease from that source. In some instances, fever, apparently arising from other causes, communicated itself to other individuals in the same family, Nos. 18 and 27. On the subject of the origin and propagation of fevers, and of the means

of preventing them, chiefly as a subject of medical police, I may take another opportunity of enlarging.

The date of the commencement of the disease in each patient, so far as we could learn it, is recorded in the next column, and in the succeeding one the date of admission. In a general or fever hospital, these dates, when regularly continued, furnish the record of the rise, height, and decline of the epidemic. The date of the commencement of the disease, compared with the date of admission, shows the period of the disease at which the patients apply for admission, and in regard to our epidemic fever the average seems to be on the eighth day. During the first seven days, although obliged to give up work, they still hope that their headach and uncomfortable feelings will be removed, by rest and quiet and domestic treatment; but an exacerbation on the evening of the seventh day puts an end to their hopes, and convinces them that the disease is no longer to be trifled with, and next morning they come to the hospital. It must however be admitted, that it is often difficult to ascertain the date of the commencement of a disease. Thus, in No. 46, the patient ascribed the cause of the fever to some gas fumes which she accidentally encountered; but there is no doubt of her fever having already begun, which rendered her susceptible of the impression of a cause which would not have been noticed at another time.

A column is allotted to the date of the crisis;

but it must be understood that this was often very uncertain, for although in some cases it was sufficiently marked, and even attended by a critical discharge, most frequently by perspiration, still it was often almost imperceptible, the symptoms remitting one after another ; but I have endeavoured to mark that as the critical day, on which the force of the fever seemed to be broken, and the remaining symptoms were those of debility only. This column should also be filled up at the bedside of the patient, as the critical change of fever is often more characterized by a certain indescribable alteration of physiognomy than by any change in the state of the functions capable of being expressed in language.

In the original table, columns were allotted to an epithet descriptive of the character of the disease, and to the sequelæ, when any occurred, but I was obliged to omit them for want of room on the printed page, and have preferred subjoining a note to each case, very briefly pointing its nature, the principal changes which took place in its progress, the chief remedies employed, and in some instances I have added dates.

I have not used Cullen's distinction of Synochus and Typhus, because I do not believe that the distinction exists in nature. I have never seen an instance of typhus fever according to his definition. All our severe fevers begin with excitement and terminate in debility, or are instances of synochus ; although, in truth, they are the identical disease from which Cullen drew his description

of typhus, and are genuine examples of the only typhus fever which exists ; but this is not a place for nosological disquisitions.

I have preferred distinguishing the cases by the epithets cephalic, pulmonic, gastric, enteritic, hepatic, &c. from the principal organs affected ; for, although frequently the functions of all were somewhat disturbed, the force of the disease seemed generally to bear upon one or two, and sometimes upon different organs in succession.

In almost every instance the head was greatly affected. The fever commonly commenced with intense headach and intolerance of light and noise, succeeded by torpor, low delirium, or maniacal excitement. The rest of the nervous system was affected at the same time. In the first period severe pain was felt along the whole course of the spine, especially at the nape of the neck and at the sacrum ; the limbs were sore, as if bruised, and often a rheumatic or paralytic state of them remained for some time after the fever had terminated.

The lungs were very commonly affected, though not always. At the beginning of the fever, next to the headach, and often as aggravating it, the cough was commonly the most troublesome symptom, but sometimes the cough and pulmonic symptoms did not supervene until the cephalic symptoms remitted. In some cases, however, the lungs were remarkably affected, and so as to give a peculiar character to the disease, rendering the title of pulmonic fever appropriate. I am convinced

that the disease described by some authors as pneumonia typhodes, and stated to have been at times epidemic, was in fact continued fever, with great affection of the lungs. I fell into this mistake in regard to the first example of it which occurred to me, and the patient was cured of continued fever under the idea that he was affected with pneumonia, (Appendix, No. VII.) But the diagnosis is commonly easy. In pneumonia the fever is symptomatic, depends upon the existence of the local affection, and declines when it is removed, while in typhus it is idiopathic, is rather the cause of the local affection, and continues its regular course after it is removed. The same principles of diagnosis serve to distinguish general fever with other local affections from similar local diseases attended by fever.

In every case the stomach was more or less affected from the first, as indicated by anorexia, nausea, or vomiting, and pain at the epigastrium, which was generally tender or painful to the touch, perhaps arising from increased sensibility of the peritonæum. At the same time there was little derangement of the functions of the intestines, so that few of our cases came under the description of enteritic fever, which seems to be that peculiar form of it which is occasionally so fatal in camps and garrisons when fever and dysentery prevail. In these cases the mucous coat of the intestines is chiefly affected, and we saw this in the body of an old woman who died of dysentery, as a consequence of the disease,

No. 43. In another fatal case, No. 66, there was great distention of the abdomen, or meteorismus. The catamenia were not interrupted by the accession of our fever, but, on the contrary, they returned in several cases where they had previously been suppressed for some months; had their periods shortened in some cases; in all were rather increased in quantity, and in one fatal case, No. 49, were enormously profuse.

The liver was less frequently affected than from the descriptions of some epidemics might have been expected; but a case, which ultimately terminated fatally, might have almost been called jaundice, No. 58; and one or two others, Nos. 72 and 87, had a sufficient tinge of the skin to entitle them, in common language, to the denomination of yellow-fever, which, however, must not be confounded with the yellow fever of the Antilles, a disease of a totally different nature. The cases in which the skin was coloured, all occurred in the summer; and in the same season the stomach and bowels seemed to suffer most.

In several cases, but particularly in one, the fauces were chiefly affected, so that for some time it remained doubtful whether it was a case of fever or of putrid sore throat. In many cases the principal complaint of the patient was of pains in various parts of the body, and loss of power especially of the lower limbs; and these remained after the fever declined, giving rise to rheumatic and almost paralytic sequelæ, in Nos. 53

and 86. But they also occurred from the very first, and one girl, No. 54, could not be moved, or even have her hand raised, without screaming from pain. In many cases there were petechiæ, or an exanthematous efflorescence on the skin, but we did not find either of these symptoms connected with any remarkable severity of the disease.

The action of the heart and arteries was very variously modified. In the greater number of cases, both the frequency and strength of the pulse was increased during the existence of the fever; in some it was frequent and weak; in others full, but natural as to frequency, in some it was almost natural, or only weak; and in many these circumstances varied during the course of the disease; and, contrary to the common idea of synochus, the pulse sometimes became fuller and stronger in the progress of the disease. In the case of one patient, who was attacked while in hospital, the principal symptoms of his previous disease, viz. excessive action of the heart and arteries, so as to shake his whole body, and even his bed, at each stroke of the pulse, were suspended during the disease, and his pulse became natural in point of strength, and increased in frequency; but after the cessation of his fever, his former disease returned. In the same manner, a very obstinate tympanites disappeared in another patient affected with fever while in the ward, and she even continued free from it for some time after she re-

covered, but she has again returned to the hospital affected, though in a less degree. The skin was parched in almost every case, but after the crisis, in a few, obstinate perspiration retarded the convalescence. The heat was in most cases increased. In summer it was generally higher than in winter, often reaching to 104 and 105 in the axilla. In one fatal case, No. 66, it remained at 103 for some hours after death.

Of the sequelæ the rheumatic and paralytic affections were most distressing. In some cases the appetite returned very slowly, and in a few great irritability of the stomach remained. In a few cases there supervened parotids or troublesome boils, especially around blistered parts, and at one time, in the beginning of January, many patients were affected with lichen simplex during their convalescence, exciting the suspicion of contagious scabies having got into the wards; but the eruption appeared in both wards, and affected only the convalescents from fever. Relapses frequently occurred, and could often be traced to an error in regimen. They took place at various periods after the decline of the original fever.

The date of dismissal is inserted to shew the duration of the disease, and the period of convalescence, and furnishes useful information for the economical management of hospitals.

The number of days our fever patients were in hospital, is expressed in the next column. The following table shows the general results in those dismissed by us :

	Winter.		Summer.		Total.
Men,	27	25	17	18	44 $22\frac{1}{2}$
Women,	21	$27\frac{2}{3}$	13	$21\frac{5}{8}$	34 $25\frac{1}{3}$
	—	—	—	—	—
Total,	48	26	30	$19\frac{2}{3}$	78 $23\frac{5}{8}$

From this it appears, that men were sooner dismissed than women, and that, in summer, both sexes remained a shorter time than in winter; and, by comparing the table with that of the total cases dismissed, it appears that in this respect there is no great difference between the fever cases, and the others of all descriptions.

The comparative mortality of the fever cases is next to be considered.

	Winter.			Summer.			Total.		
	No.	Died.	One in	No.	Died.	One in	No.	Died.	One in
Men,	28	1	28	19	3	$6\frac{1}{3}$	47	4	$11\frac{5}{4}$
Women,	28	2	14	14	1	14	42	3	14
	—	—	—	—	—	—	—	—	—
	56	3	$18\frac{2}{3}$	33	4	$8\frac{1}{3}$	89	7	$12\frac{5}{7}$

This mortality is certainly sufficiently great, to show the severity and danger of the disease; but the numbers are much too few, and the circumstances of the clinical wards too peculiar to afford a fair average of the rate of mortality. Thus, comparing the deaths from fever with those from other diseases in our wards, it was much less in winter, and much greater in summer, and yet, generally, the fever was milder in summer than in winter.

Of the fatal cases of fever, No. 20 was admitted almost moribund, and never was able to speak to

me after he was put to bed. No. 88 was altogether anomalous, and died in six days after admission. No. 49, 63, and 64, died in the height of the fever, and No. 43 and 58 died of the sequelæ in sixteen and forty-one days after admission. The appearances upon dissection in some of these cases are subjoined to this report.

I might have added a column to indicate the chief means of cure employed in each case, but I could not conveniently condense it into a tabular form. The treatment of the patients under my care was purely antiphlogistic, and it was probably owing to this circumstance that we saw so little of that debility which was so common in these fevers when treated with stimulating and tonic remedies. So far as my observation goes, the debility which occurs in the course of typhous fevers, is always the consequence of, and proportioned to, the previous excitement, and, by reducing the violence of that excitement in the early stages of the disease, by depletion, and the removing of every irritation, we prevent the debility from coming on, at least in the same degree. Some of our patients were able to get out of bed almost as soon as the fever had run its course; and, in none of those who recovered was there any sloughing of the nates arising from long pressure, in consequence of utter inability to change their posture, which used frequently to carry off patients, treated with stimulants, long after the fever had terminated. Opium I gave only as an

anodyne, or diaphoretic, and very sparingly; wine but occasionally, and in small quantities, during the convalescence, and porter sometimes during the same period. Indeed, the patients, although desirous of generous diet to strengthen them, as they supposed, when indulged in it, often confessed that it was too much for them, and were convinced that they recruited faster with slops and ordinary diet. Blisters were the only stimulants I frequently employed, and these often did essential service, especially when the lungs or head were much affected, nor did they ever produce any unpleasant consequence, or assume an alarming appearance.

The treatment, as I have already said, was purely antiphlogistic, and often simple in the extreme. In some cases, the saline mixture, with cold or tepid washing, laxatives, or enemas, when necessary, and an anodyne antimonial occasionally at night, answered perfectly. In others, a much more active plan was pursued, blood was freely abstracted, both locally and generally, and drastic purgatives liberally exhibited, with the most decided advantage. I cannot look back upon the treatment of typhus, in the days of my apprenticeship, without wonder. In those days we, the students, would have shuddered if our teacher had prescribed blood-letting to a fever patient, as if he had ordered him to be put to death; and I have seen the exhibition of a simple saline purgative excite our severe censure. Nor did the

amelioration of the patient after its operation gain any credit to our teacher. In our opinion, every evacuation must be injurious in a disease of indirect debility, for, although the Brunonian doctrines were never recognized as orthodox in our schools, they influenced the opinions and practice of our scholars. It is not my intention to trace the history of the decline of this preposterous doctrine, or of the steps by which we have arrived at a more rational treatment. I shall content myself with saying a very few words of the remedies chiefly employed in the cases under my care.

When active treatment seemed to be indicated by intense headach, pain of neck and loins, suffused eyes, intolerance of light, pain at the pit of the stomach or belly, difficulty of breathing, and a full throbbing pulse, the abstraction of blood was the most effectual remedy. When there was great excitement of the whole arterial system, or several organs were much affected at one time, venesection was preferred, and it was sometimes repeated at a short interval. At first I contented myself with bleedings of ℥viii. , but afterwards I became more bold, and frequently ordered ℥xx. to be taken at one time; and I never saw any occasion to regret taking too much, but I have regretted taking too little. I never ventured, however, upon the ℥xl. bleedings, which were practised by others. When the head was principally affected, arteriotomy was

sometimes ordered ; but, where local bleeding was indicated, I preferred leeches or cupping. The relief obtained by abstraction of blood was often instantaneous and striking. The headach was removed as if by a charm, and in some instances permanently ; but although I am satisfied from the experience of others, that duly employed venesection is capable of cutting short the fever, I am not certain that I was so successful in any of our cases. Indeed, the violence of the fever was sometimes subdued, and it run its course gently and quietly, the patient scarcely seeming more than languid and drowsy. More commonly, however, the relief was only temporary, and in a day or two the headach returned, though with less severity, and now it generally yielded to leeches applied to the forehead. Although bloodletting was most beneficial in the early stages of our fever, there was no period of its course, nor, indeed, of the convalescence, in which it was not occasionally employed, when circumstances seemed to indicate its propriety.

The direct application of cold to the skin by means of affusion or sponging with cold water and vinegar, was almost universally ordered, and its good effects in reducing morbid temperature, and in alleviating the burning sensation of the patient, were unequivocal ; but I have no confidence in its being able to cut short a fever actually begun. Whenever it has effected this desirable object, it must have been during the precursory stage, dur-

ing that week of listlessness and chilliness, which frequently precedes the distinct rigors from which we date the accession of the true fever. In cases where the patient suffered from rigors or coldness of the extremities, the pediluvium was of the greatest benefit.

Laxatives and evacuant enemias of every kind were also powerful auxiliaries to the preceding remedies ; but, although I did not scruple to use purgatives when indicated, I commonly contented myself with emptying the bowels, and keeping them free, and seldom attempted to counteract the febrile excitement by drastic purging. I found, or thought I found, the lancet and leeches more certain, and more under my control ; and I had some fears that the function or structure of the intestines might be deranged by acting upon them too powerfully during a disease which is apt to direct its attack upon any weakened organ.

Emetics I did not find often necessary, as I preferred exciting the stomach to evacuate its contents in the natural direction. With this view, I combined with other purgatives which act upon the intestines, small doses of emetics, such as ipecacuan with rhubarb, or tartar emetic with saline solutions, under the idea that they act especially upon the stomach and upper part of the intestinal canal, and, if they also produced vomiting, it was perhaps beneficial.

Mercury I sometimes ordered as a purgative, in the form of calomel, or the blue pill, but

scarcely gave a trial to what is called the mercurial practice. I was satisfied with the effects of those means I was accustomed to employ, and in moderate cases salivation seemed to me a severe remedy, while in severe cases I preferred agents, whose operation was more certain and speedy.

Cases of other Diseases in both Sexes, and during both periods.

N.	Name.	Age.	Sex.	Profession.	Disease.	Adm.	Dism.	Days.	Event.
1	D. M ^c L.	45	M.	Carter	Phlogosis Phlegmone	June 30	July 30	31	Cured
2	C. F.	15	F.	Servant	Ophthal. Membran.	June 2	July 6	37	ditto
3	R. W.	20	F.	Servant	ditto	July 6	July 30	25	ditto
4	W. S.	16	M.	Servant	Cynanche tonsill.	Dec. 20		14	ditto
5	J. M.	29	M.	Servant	Cynanch. pharyng.	May 11	June 16	37	ditto
6	J. R.	19	F.	Servant	Pneumonia pleuritis	May 27	June 16	21	ditto
7	P. C.	19	M.	Labourer	ditto	May 27	June 1	6	ditto
8	H. M.	30	M.	Labourer	Pneum. peripneum.	May 17	June 1	16	Relieved
9	A. B.	26	M.	Baker	ditto	May 8	May 27	20	ditto
10	M. J.	18	F.	—	Peritonitis	July 9	left	23	Cured
11	G. J.	18	F.	—	ditto	July 10	July 28	14	ditto
12	A. S.	40	F.	Married	ditto	July 10	July 15	6	ditto
13	G. R.	20	F.	Married	ditto	July 11	left	21	ditto
14	E. M.	27	F.	Married	ditto	July 16	left	16	ditto
15	R. W.	41	M.	Flax-dresser	Hepatitis acuta	July 11	left	21	ditto
16	E. G.	21	F.	Servant	Hepatitis chronica	Nov. 23	left	70	ditto
17	W. J.	12	M.		ditto	May 17	June 26	40	Relieved
18	E. F.	30	F.	Servant	ditto	June 20	left	32	Better
19	J. M ^c D.	20	F.	Servant	Rheumat. acutus	Dec. 4	Dec. 30	25	Cured
20	M. S.	50	F.		ditto	Dec. 10	Feb. 1	53	ditto
21	M. M ^c P.	19	F.	Servant	ditto	May 18	June 1	14	ditto
22	F. C.	20	F.	Servant	ditto	June 9	June 15	7	ditto
23	A. M ^c L.	22	F.	Servant	ditto	June 9	July 14	26	Relieved
24	J. S.	44	M.	Gardener	Pleurodyne	May 10	May 23	14	Cured
25	M. G.	27	F.	Married	Ischias	June 26	July 13	18	Relieved
26	E. F.	23	F.	Servant	Rheumat. chronicus	July 2	July 30	29	ditto
27	W. B.	19	M.		Variola discreta	Nov. 16	Dec. 11	26	Cured
28	A. R.	1½	F.	Sucking	ditto	Nov. 26	Dec. 17	22	ditto
29	E. B.	3	F.		Variola confluens	June 22	June 30	9	Died
30	S. B.	19	M.	Sailor	Rubeola vulgaris	May 23	July 10	49	Cured
31	S. W. J.	12	F.		Scarlatina anginosa	June 25	July 4	10	ditto
32	C. L.	19	F.		ditto	July 7	July 18	12	ditto
33	M. R.	28	F.		Hæmoptysis	Nov. 13	Dec. 23	41	Relieved
34	J. M ^c G.	20	M.	Shoemaker	Phthisis pulmonalis	Nov. 14	Jan. 13	61	ditto
35	R. C.	46	M.	Weaver	ditto	Nov. 17	Dec. 27	34	Died
36	A. W.	19	M.	Weaver	ditto	Nov. 25	Dec. 15	21	ditto
37	J. T.	46	M.	Carpenter	ditto	June 20	July 17	38	Relieved
38	A. M ^c P.	25	F.	Servant	Menorrhagia	May 29	June 10	13	Cured
39	E. R.	45	F.		ditto	June 6	June 30	25	ditto
40	J. N.	58	F.	Married	Hæmaturia	July 15	July 30	11	Relieved
41	J. D.	22	F.		Apoplexy	Dec. 3	Dec. 5	3	Died

N ^o .	Name.	Age.	Sex.	Profession.	Disease.	Adm.	Disch.	Days.	Event.
442	J. T.	40	M.	Sailor	Apoplexy	Dec. 16	Dec. 18	3	Died
443	J. M.	68	M.	Ploughman	Paralysis hemipleg.	June 19	June 27	9	Cured
444	W. J.	12	M.		Paralysis parapleg.	May 17	June 26	40	No better
445	J. H.	40	M.	Labourer	Dyspepsia	Dec. 20	Dec. 30	11	Relieved
446	H. F.	23	F.		ditto	Dec. 25	Jan. 3	10	Cured
447	G. M ^c C.	34	F.	Married	ditto	June 14	Feb. 1	19	Better
448	W. H.	19	M.	Gardener	ditto	Jan. 14	Feb. 1	19	No better
449	M. D.	13	F.		ditto	May 27	June 7	12	Cured
550	A. G.	65	M.	Ploughman	ditto	June 3	June 19	17	No better
551	M. G.	48	F.		ditto	July 15	July 31	17	ditto
552	E. H.	45	F.	Servant	ditto	June 18	June 29	12	Relieved
553	J. D.	40	F.	Sempstress	Epilepsia	June 2	July 15	45	ditto
554	J. W.	36	M.	Weaver	Palpitatio	Nov. 11	Jan. 25	46	ditto
555	J. C.	36	M.	Brewer	ditto	Jan. 5	June 26	left	with fev.
556	R. L.	36	M.	Mason	ditto	Jan. 22	Feb. 1	11	No better
557	H. S.	57	M.	Currier	Dyspnœa catarrh.	May 27	June 9	14	Relieved
558	J. D.	40	F.	Sempstress	ditto	June 2	July 15	45	ditto
559	C. J.	45	M.	Whiteleadm.	Colica pictonum	Dec. 3	Dec. 8	6	Cured
660	P. D.	75	M.	Weaver	Cholera spontanea	June 20	July 2	13	ditto
661	A. W.	28	M.	Carter	Diarrhœa biliosa	June 19	July 4	16	Worse
662	A. F.	60	M.	Labourer	Diarrhœa mucosa	Nov. 10	Dec. 4	25	Died
663	J. L.	46	M.	Sailor	ditto	Jan. 6	Feb. 1	27	Relieved
664	M. S.	47	F.		ditto	May 21	July 13	15	Cured
665	M. L.	60	F.		ditto	June 4	June 25	22	ditto
666	E. C.	42	F.		Diabetes mellitus	Nov. 20	Jan. 16	58	Died
667	J. B.	26	M.	Labourer	ditto	May 8	left	85	Worse
668	M. J.	18	F.		Hysteria	July 17	July 20	4	Cured
669	J. B.	18	F.		Tympanites intest.	Dec. 10	Jan. 10	left	with fev.
770	J. T.	40	F.	Married	Hydrops.	May 14	June 26	48	Died
771	J. W.	56	M.	Labourer	Anasarca	May 7	May 23	17	Cured
772	W. H.	47	M.	Seaman	ditto	June 27	July 9	14	ditto
773	T. M ^c L.	48	M.	Glassblower	Hydrothorax	Jan. 10	Jan. 31	22	Relieved
774	R. B.	58	M.	Nailer	ditto	July 16	left.	6	Improving
775	G. W.	33	M.	Shoemaker	Syphilidis sequelæ	Nov. 11	Jan. 11	62	ditto
776	J. H.	24	M.	Hatter	Gonorrhœa	Jan. 22	Feb. 1	41	Better
777	M. H.	28	M.	Carter	Icterus	Jan. 27	Mar. 23	left	Cured
778	T. F.	33	M.	Labourer	Amaurosis	May 29	June 19	22	No better
779	J. B.	62	M.	Shipwright	ditto	June 25	July 31	37	Improved
880	C. A.	23	F.	Married	Ulcus palati	Jan. 31	Jan. 14	15	Relieved
881	D. M ^c D.	65	M.	Shoemaker	Lichen simp. et agr.	July 14	July 31	18	Relieved
882	M. T.	35	M.	Labourer	Lepros vulgaris	June 9	July 4	26	Improved
883	B. C.	16	F.		Psoriasis diffusa	July 1	July 31	31	Improving
884	D. M ^c D.	21	M.	Labourer	Psoriasis invet.	June 26	July 21	26	ditto
885	T. C.	9	F.		Porrigo favosa	July 2	July 29	28	Cured
886	H. G.	20	M.	Labourer	Echthyma lurid.	July 6	July 13	8	ditto
887	A. D.	62	M.	Weaver	Scabies cachectica	July 15	July 31	7	ditto
888	W. D.	27	M.	Tinsmith	Scabies purulenta.	July 17	July 31	5	Relieved

The number of cases of each disease in the preceding table is much too few to afford any general results, and it is only given as contributing a certain number of facts, which, connected with others accumulated at other times and in other hospi-

tals, may, at last, establish various points in the history of these diseases. In the table I have followed Cullen's Nosology. It is not, however, well adapted for this purpose, chiefly on account of the artificial principles of its arrangement requiring diseases, which scarcely differ from, or rather run into each other, to be placed not only under different genera, but even under different orders and classes. This is remarkably the case in regard to pulmonic affections, the place of which it is often difficult to determine, when they combine in various degrees the symptoms of pneumonia, catarrhus, phthisis, dyspnœa, and asthma. In a tabular view of diseases, these should be placed contiguous or nearly so, and there should be a head of pulmonary affections to include those which are doubtful, and cannot be referred with certainty to any of Cullen's genera.

None of twenty-six examples of Cullen's order of phlegmasia terminated fatally; and it may be remarked, that, of these, only four cases, one cynanche tonsillaris, No. 4, one hepatitis, No. 16, and two rheumatic, No. 19 and 20, occurred during the winter quarter, for, although abdominal inflammations are more frequent in summer, yet pulmonary inflammations are considered as a winter disease. Inflammatory diseases occurred in both sexes, 17 in females, and 9 in men. This majority of the females, we shall afterwards find, depends upon the number of them affected with rheumatism. The patients who had inflamma-

tory complaints were all young or in the prime of life, from 12 to 50, viz. 8 under 20, 11 under 30, 2 of 30, and 5 from 40 to 50 inclusive. The time they remained in hospital was very various, from one week to ten, but, on an average, about three weeks and a half.

The two cases of inflammation of the eye were instructive; the one, No. 3, was a decided case of inflammation of the iris, in all probability arising from the use of mercury in a constitution untainted by syphilis, and its treatment furnished a very striking illustration of the principle, that the same agent is sometimes the most effectual cure of the disease excited by itself; for, in this alarming case, mercury, pushed rapidly to full salivation, operated like a charm. I hence thought the case worthy of being detailed in the Appendix. The other case of ophthalmia, No. 2, was doubtful; some thought it merely a case of ophthalmia membranarum, while others considered it as another instance of iritis; and I incline to the latter opinion. If so, it was an instance of this severe disease being cured by the application of vinum opii, without the use of mercury.

Of decided inflammation of the lungs there were only four examples, Nos. 6, 7, 8, and 9; but some others, Nos. 34 and 37, perhaps, should have been classed here, although the copious expectoration of pus led me to rank them as instances of pulmonary consumption; and even the cases referred

to dyspnœa catarrhalis, Nos. 57 and 58, were probably connected with an inflammatory state of the mucous membrane of the lungs. The case No. 30, of cough with hectic fever after measles, also properly belonged to the pulmonary inflammations. In cases Nos. 30, 35, and 37, but especially No. 34, the fumes of tar, according to the recommendation of Dr Crichton, were tried with some advantage to the difficulty of breathing, but none certainly as to the ultimate termination of the disease. Indeed, no one who has ever witnessed the examination of the lungs of a person who has died of phthisis, can believe that this disease admits of cure when fully formed. The reputed cures all originate in an error in the diagnosis, or in extending the term phthisis to catarrhal affections of the lungs, without alteration of structure; and, when the secretion from the mucous membrane is merely increased, although inclining to purulency, the tar vapour, as applied directly to the seat of the disease, may prove serviceable. I have subjoined a few notes of this case in the Appendix, to show the immediate effects of these fumes. Two cases of phthisis died in the ward, and the appearances discovered on dissection, inserted in the Appendix, justify my unfavourable prognosis of this disease.

Abdominal inflammation was comparatively frequent during the summer quarter. Its seat seemed to be in the peritonæal membrane, and hence I have given the name of Peritonitis to these

cases, although by others some of them might have been denominated, from the organ whose peritonæal coat was the chief seat of the disease, Gastritis or Enteritis. But inflammation is seldom confined to one spot of the peritonæal coat, and, as it is apt to spread along a continuous membrane like the peritonæum, from organ to organ, and even by contact from one part of it to another, as we may see in inflammation of the eyelids affecting the contiguous membrane of the eyeball, I have preferred the general term Peritonitis where I was not certain of the organ affected. This doubt did not occur in Nos. 15, 16, 17, and 18, which I have considered as examples of hepatitis, and, indeed, it was not certain that in these the disease was confined to the peritonæal coat. No. 10 was a very severe case of peritonitis, and began, probably, in the uterus, and spread to the bladder and intestines. This girl was seized, during convalescence, with inflammation and swelling of the parotid of both sides.

All our cases of rheumatism, seven in number, occurred in females from 19 to 50 years of age. One of these, No. 26, was accompanied by nodosity of several joints, especially the right knee, which was much relieved by issue blisters; and another, No. 25, was an instance of ischias nervosa.

The prevalence of small-pox in this city during the whole of this year, suggests many observations which would not be misplaced here, as to the peculiar causes which have prevented this island es-

pecially from deriving all those advantages from the Jennerian practice which it is calculated to afford; but the subject has been so ably discussed by Dr Monro* and Mr Hennen,† that I shall content myself with expressing a wish, that the Hospital had the means of admitting every case of small-pox which occurs among the lower classes, and the magistracy the power of sending them in. This is one of those diseases, in regard to which it is most essential to keep, in the Hospital journals, a record of the place from which the patient comes, as well as of the probable source of the disease, both for assisting us in the diagnosis of doubtful cases, and of tracing the origin and progress of an epidemic.

From our table it appears that measles and scarlatina were also in this city during summer. The lad who was affected with the former, No. 30, had a very bad recovery, and left the house with symptoms which may terminate in consumption. The scarlatina cases were smart, but not violent, and with them the cold bathing had

* Observations on the different kinds of Small-pox, and especially on that which follows Vaccination, illustrated with a number of Cases. By Alexander Monro, M. D. F. R. S. E. &c. 8vo. Edinb. 1818.

† An Account of the Eruptive Diseases which have lately appeared in the Military Hospitals of Edinburgh, &c. By John Hennen, Esq. Deputy-Inspector of Military Hospitals for North Britain. Edin. Med. and Surg. Journal, Vol. XIV. p: 409.

the very best effect. The younger patient, No. 31, although averse to the bath at first, found so much relief from it, that, whenever she was oppressed by the increased temperature of her skin, she got out of bed, and cooled herself in the tub of cold water left at her bedside.

Both cases of apoplexy, Nos. 41 and 42, proved fatal; one was remarkable as occurring in a young woman of 22. The appearances after death were carefully examined by the late Dr Gordon, and are detailed in the Appendix.

The cases of dyspepsia, No. 45—52, were numerous and various, and I cannot boast of the success of the means of treatment we employed, although great attention was also paid to the diet of the patients. This disease occurred in both sexes, and in individuals from the age of 13 to 65. One of our patients was a ploughman, and another a gardener; and some of the worst cases I have met with belonged to the latter profession, although, as well as the former, it implies exercise in the open air, the circumstances which have most effect in removing this complaint, when it occurs in persons of a sedentary and inactive mode of life. Animal diet, which I have found successful on other occasions, was at this time of little use.

The epileptic fits in the only patient, No. 53, affected with that obstinate disease, were suspended, as long as she remained in the ward, by the copper pill; but, as unfortunately is most fre-

quently the case, its effects were not permanent, and the woman is, I understand, re-admitted nearly as bad as before. This woman is entered a second time in the table, No. 58, as having dyspnoea, which occurred every morning. It seemed to be relieved by the application of galvanism, as proposed by Dr Wilson Philip.

We had three severe cases of palpitation, No. 54, 55, and 56, probably all connected with organic diseases of the heart. In hospitals we frequently observe, that several instances of a disease rather rare are in the wards at the same time. It seems to be owing to the reports of the friends, if the first case admitted seems to be benefited by the treatment, as in the present instance; for case No. 54 received the most decided relief from confinement to the horizontal posture, low diet, digitalis, and small bleedings. In the other cases, the treatment was less beneficial, but No. 55 was seized with continued fever while in the house, No. 28 of the fever cases, and during the continuance of his fever the symptoms of his original disease were suspended.

The cases of bowel complaint, by which I here mean those affecting the state of the alvine evacuations, all occurred in persons more or less advanced in life. One, No. 62, proved fatal, and the appearances on dissection sufficiently account for its unfortunate termination. Another, No. 61, was hopeless, although he left the house impatient at not finding relief. No. 63 was one of

those cases of simple but obstinate diarrhœa which occur so frequently among old seamen. No. 64 and 65 were cases of that form of disease which is removed by copious alvine discharges and sedatives. No. 64, after being long under treatment and due evacuations, was cured chiefly by anodyne starch clysters, which had a very decided effect in allaying the irritation of the rectum. The case of cholera, No. 60, was severe, and I saw others about the same time in private practice.

We had two cases of diabetes, one of which, No. 66, is given in the Appendix, on account of the dissection. During life there was a tumor upon the abdomen of this poor woman, which puzzled us extremely, on account of its size, form, and especially the thinness of its coats, so that it seemed to be lying just under the integuments. It evidently contained fluid, and as it had been preceded by general swelling of the abdomen, I conceived it to be a species of encysted dropsy, but must confess that I did not conjecture the true cause. This, indeed, would have been discovered, and the patient would have been saved much agony, if she had submitted to the directions given for drawing off her urine by the catheter, but, from false delicacy, she obstinately refused to allow it to be introduced. After death, even before dissection, the sudden subsiding of the tumor upon the escape of a great deal of urine, showed that it proceeded from distention of the urinary bladder, and

the state of tenuity, or rather the total decay of the abdominal muscles covering it, explains the reason why it was never emptied by her voluntary efforts while in the ward. I have little doubt that it was originally produced by the same delicacy, which increased her suffering before death; and which accustomed her to suppress her urine, after the commencement of the diabetes rendered the calls of nature more frequent. The enlargement of the sympathetic nerve in this case is worthy of notice, but I am unable to determine how far it was connected with her disease. The other case of diabetes, No. 67, occurred in a young man, who was at the same time suffering from the most decided tubercular phthisis. As the journal of the case is very long, I shall give a very short selection of the reports in the Appendix, and I shall take the liberty of subjoining an unpublished dissection of a case of diabetes, complicated with phthisis, which had been formerly in the hospital, and was communicated to me as resembling in many particulars that of our present patient, by Mr Gardner, who attended him in his own lodging after he left the house.

The case of hydrothorax, No. 73; has already been quoted by Dr Abercrombie,* as an instance of the beneficial effects of venesection in some

* Observations on certain Dropsical Affections which are treated by Blood-letting. By J. Abercrombie, M. D. Edin., Med. and Surg. Journal, Vol. XIV. p. 174.

cases of dropsy. He remained well for several months, but his complaint has returned. In No. 74, the debility was so great, that I feared for some time to have recourse to bleeding, which was otherwise indicated by the great difficulty of breathing, vertigo, and oppression of his head, and the very albuminous nature of his urine; when ventured upon, its effects, so far as it was tried, were favourable. The case of general dropsy, No. 70, which terminated fatally, was the most severe I ever witnessed. This woman I was also inclined to bleed, but from the enormous swelling of every part of her body, the operation was absolutely impracticable. On dissection, the cellular substance in every part, even in the heart itself, was distended with serum. The abdomen was full of water, and the lungs were literally *swimming* in the immense quantity of fluid contained in the chest. But in this cavity, besides the serum, there was a great deal of albuminous coagulum.

The case of tympanites, No. 69, was singularly obstinate and curious. It occurred in a girl otherwise not unhealthy, who performed all her natural functions regularly, unless when the distention of the abdomen by pressure rendered necessary the use of the catheter to draw off her water; but she was attacked with the epidemic fever, No. 52 of the fever cases, while in the house, and from that moment her abdomen began to subside, and continued flaccid during its whole course, nor did

it return while she remained in the house, which it since has done, though not in the same degree. Her case is also remarkable, from her being bled repeatedly shortly before the accession of fever, and by having been cupped to the extent of 12 ounces at its very commencement.

The case No. 75, which was an instance of the dreadful effect of syphilis or rather of mercury, injudiciously administered for its cure, recovered under the use of the decoctions of sarsaparilla and mezereon. In No. 76 we did not find the cubebs so successful as from other trials we expected. Phymosis supervened, requiring surgical assistance. The man with jaundice, No. 77, was dismissed cured, March 27.

The case of ulcer of the palate, No. 80, was ascribed to a singular cause, the effect of nitre as a poison. I have inserted in the Appendix its history, which in many respects resembles that published by Mr Butter in the Edinburgh Medical Journal, Vol. XIV. p. 34.

The variety of cutaneous affections, No. 81-88, which occurred, was highly instructive to those pupils who witnessed them, and enabled us by direct comparison at the bedside of the patient to confirm the truth of the descriptions and delineations of this difficult class of diseases by Drs Willan and Bateman.

Besides the diseases for which the patients come to an hospital, they sometimes present other appearances worthy of notice. Of our fever patients,

No. 50 was an Albiness from the Western Islands, and one of our anasarcaous patients, No. 71, presented an example of the skin of a native of Bengal having become almost entirely white without the agency of obvious disease.

No. 17 and 44 is the same person, entered twice for different diseases, and No. 53 and 58 is in the same circumstances. Nos. 69 and 55 are also inserted in the fever list, as Nos. 28 and 52, in consequence of being attacked with fever in the ward.

The dissections contained in the Appendix I consider very valuable. To me they are particularly interesting, as being the last fruits of my professional intercourse with the late Dr John Gordon, whose zeal and science as a pathological anatomist qualified him so eminently for the situation he filled in the Hospital, and whose private virtues made him most beloved by those who knew him best.

APPENDIX.

IN making a selection of the fever cases which occurred in the clinical wards, I have had two objects in view ; to give a picture of the disease in its ordinary form, and in all its stages, and to detail the progress of its most important varieties. The infection of two patients while in the wards for other complaints, enabled us to describe, at the bed-side, the fever from its very commencement, and the daily state of the symptoms in its first stage, which we have rarely an opportunity of doing even in fever hospitals. To these cases, No. I. and II. of the succeeding series, a history of the disease, under which they previously laboured, is prefixed, to show more satisfactorily the state of the individual, at the time of the accession of the fever, the modification it may have received from the preceding treatment, and regimen of the patient. No. III. is an example of the progress of the disease, when it was continued to the 17th day, and IV. and V. are instances, where, though commencing with severity, it terminated in a shorter period. No. VI. is inserted to show, that, even in an advanced stage of typhus, blood-letting, if indicated, may be employed with safety and advantage. No. VII. and VIII. are cases of pulmonic typhus, or of the pneumonia typhodes of authors, successfully treated by free abstraction of blood. No. IX. is an example of the maniacal form of fever. I have lastly inserted the reports of every fatal case, whether arising from the severity of the disease itself, or errors in the manner of treating it, as they always convey some useful information respecting the immediate causes of death, and the means of obviating them.

No. I.

Case exemplifying the early Symptoms of Epidemic Fever observed from the commencement, in a Man while a Patient in the Clinical Ward, affected with inordinate action of the Heart and Arteries.

J. C. Brewer's Servant, æt. 36. No. 28 of Fever Cases.

5th January.—Complains of violent pain at the scrobiculus cordis, at times extending through the left shoulder, and down to the elbow of the same side, increased by any exertion, and chiefly by going up stairs, or ascending ground; more severe in the night, and then causing considerable dyspnœa, with short dry cough and palpitation, which he says is to be felt at the bottom of the sternum, while the pain continues very violent. It is at present very distinct, as far down as the seventh or eighth rib, synchronous with that at the wrists; his feet and ankles are œdematous; says his sleep is disturbed by startings, but reports his general health and functions to be quite natural; pulse, in both arms, 96, rather full.

His complaints commenced about eighteen months ago, at first so very slightly as to appear of no moment, and having intervals of perfect ease for several weeks at a time. In the middle of September he began to be most severely affected, and was obliged to suspend his work for three weeks, during which he was bled to \bar{z} xiv. and \bar{z} xvi., with some relief, and took some doses of salts. He returned to his work in the end of September, and continued employed for three weeks, during which he continued to suffer great uneasiness from his complaints. On Monday 13th October, on returning home, he was much distressed, for the first time, by difficulty of breathing, and very great increase of pain, but declined taking advice. On the night of the 19th he was so much affected by severe aggravation of the pain, as not to be able to lie in the recumbent position in bed for five minutes at a time, and if he chanced to slumber in that position for a few minutes, he suddenly awoke as if from a terrifying dream, and was obliged to sit erect, which was followed by a mitigation of suffering, but by no means

complete relief. He was seen next morning by Dr Hunter, to whom I am indebted for these particulars of the commencement of his affection, and he at this time noted the following symptoms:

Pain very severe, accompanied with the same palpitations, and confined to the left side of the breast. Breathing very slightly affected, with occasionally a little dry cough. He complained also of pain, extending from the left side of the breast to the left shoulder, and down as far as the elbow, and was particularly sensible of this pain, when he suffered most from the pain in his chest. He also felt a pain in his left temple, and on two occasions in the right, when he coughed a little, or when the pain of the chest was severe; pulse 88, very full, firm, and throbbing, but quite regular, and no intermission or difference of heat perceptible. The natural functions performed regularly. On examining him stripped in bed, a violent shocking, synchronous with the pulsation of the carotid, femoral, and radial arteries, was observed to shake the chest, and extend on the abdominal parietes as far nearly as the umbilicus, and middle of the right hypochondriac region. He laid his hand on the last bone of the sternum, as the seat of the pain, and said that it did not extend over a larger surface than a half-crown piece.

Dr Hunter bled him to $\frac{3}{4}$ xxiv., and gave him powder of calomel and gamboge, with draughts of tinct. digit. and sulph. acid, and restricted him to a dry diet, consisting chiefly of vegetables. Next morning he had passed a better night; his powders had vomited and purged him smartly; he had no pain of arms, and was quite free from pain of heart; breathing natural, but more cough; pulse 82, full, but softer; dreamt little, and had only one or two fits of palpitation, of short duration. He was again bled to $\frac{3}{4}$ xxiv., which induced syncope for a short time. On the 24th he was again bled to $\frac{3}{4}$ xxiv., and on none of these occasions did the blood exhibit any buffy coat. By this treatment his complaints were much relieved at the time. The violent shock of each pulsation had disappeared, and given place to a gentle tumultuous motion; and his paroxysms of terror, palpitation, and pain, during sleep, were reduced in force and duration.

After coming into the hospital he got large doses of tinct. digit. and was bled to $\frac{3}{4}$ xii. on January 6th; again to $\frac{3}{4}$ xii. on January

11th; and a third time to 5xii. on January 14th, with considerable relief. From the 24th, the reports, as connected with the commencement of contagious fever, became more interesting.

January 24th.—The large arteries throughout the whole body beat with unusual force; considerable headach came on in the night, and continues; tongue still white, with some bad taste; bowels regular; pulse 86, rather strong.

Mitt. sang. statim ad 3xij. Cont. diæta. lactea.

25th.—Headach considerably relieved by the bleeding, but he still has it slightly; pulse 98, as before; bowels costive.

Capt. bolum jalap. comp. Cont. diæta.

26th.—Bolos operated freely, but he has been very sick; has had no affection of pain, palpitation, and terror, during the night; pulse 100.

Int. bolus. Cont. diæta.

27th.—Had one or two rigors during the night, not followed by heat; pulse 90, fuller, and a little hard; slept tolerably; some headach and thirst, but not so great as the night before; no pain of back or limbs; some cough; no cynanche; bowels regular; urine free; heat not increased.

Mitt. sang. stat. ad 3xx. Bibat. pot. acid. mineral. ad libit.

28th.—Only 3xij. of blood were taken last night, as he fainted; but the remainder of the quantity ordered was taken this morning; during the night had no pain or palpitation; slept well, but was affected at one time with giddiness, which obliged him to sit up; slight pain of frontal region; tongue a little dry; some bad taste of mouth; no appetite; slight cough; pulse 98, not so full as usual; heat increased; bowels rather costive.

Capt. stat. elect. sennæ, 3i. et repetr. omni horâ ad catharsin. Rep. pot. acid.

Ordinary diet, with one lb. of beef-tea, instead of broth.

29th.—No complaint of chest, but slept ill; has some headach; thirst, and bad taste of mouth; tongue dry, but not foul; considerable cough; no sickness, or pain of epigastrium; no general pain; urine and bowels natural; pulse 100, full, but less strong; arteries generally beat less strongly; heat of skin increased, and somewhat pungent; little febrile anxiety.

Int. elect. sennæ. Cont. pot. acid. et diæta. Capt. mist. mucilag. opiat. ʒi. sæpies in dies, et applicend. hirud. viij. temporibus.

30th.—Had a good night, and his symptoms are all very mild; cough less severe; little headach; some thirst; tongue rather foul, but moist; bowels regular; urine free; pulse 104; no pain in the region of the heart, and much less pulsation than before this attack.

Cont. pot. et mist.

31st.—Symptoms all mild; slept tolerably; pulse 118; heat slightly increased; bowels and urine natural; tongue brown, but not very parched; thirst rather increased.

Cont.

February 1st.—Little complaint, but laments occasionally when spoken to; tongue parched in the middle; pulse 98, less full than when natural; some subsultus; bowels and urine natural; pulsation of heart diminished; heat pungent; cough less; no headach.

Cont. mist. et pot. acid.

The case after this proceeded very mildly. On the 5th of February he was reported convalescent. He is still alive, but suffers greatly from the affection of his heart.

No. II.

Case of Fever observed from its commencement to its conclusion, in a young Woman while a Patient in the Clinical Ward affected with Tympanites.

J. B. æt. 18. No. 52 of Fever Cases.

10th December 1817.—The whole abdomen is much swelled and tense, but nowhere painful when pressed, except on the left side of the umbilicus; with a sense of tightness at the scrobiculus cordis. The contents of the abdomen give the feeling of great weight, especially when she stoops, which seems to hang, for the most part, from the left hypochondrium. Occasional headach and vertigo; pain in the small of back, sometimes extending down the thighs; urine very scanty, voided in very small quantity, turbid, and of a white and yellowish colour, depositing a very copious sediment; occasional cold sweatings, which happen, for the most part, at night, when she

gets into bed ; her feet are in a constant state of perspiration, but still feel very cold ; pulse 84 ; tongue clean and moist ; bowels very costive ; had no stool since Monday last ; catamenia have not appeared for seven weeks ; appetite good ; no thirst.

Complaints began about fifteen months ago, after an attack of enteritis. She was first affected with frequent and slight epistaxis. After this had ceased, the swelling of the abdomen commenced, which was about twelve months ago, and it has gradually continued to increase. About eight weeks ago she had severe pain on the left side of the umbilicus, which sometimes continued incessantly for eight or ten days at a time.

She has used ung. hydrarg. for nine weeks past, with which she rubbed the whole of the abdomen, but without any apparent lessening of the swelling. She has likewise used a number of other medicines, the nature of which she does not know.

After admission, notwithstanding a great variety of remedies, these symptoms became rather more severe. On the 20th her menses reappeared for a short time, but without giving any relief. She was twice bled on December 13 and 25, on account of giddiness, which it relieved. She suffered greatly from retention of urine, which most commonly required to be drawn off by the catheter ; and the state of the abdomen was reported, on the 31st December, as being very large, uniform, and elastic, and on percussion emitting a pretty distinct hollow sound. She got ten grains of the aloetic pill at bed-time, and was ordered the cold bath. After this the following daily reports were given.

Jan. 1st.—Did not take the bath, as on a former occasion, it had a very bad effect. Pills operated, and the tension and pain of abdomen are considerably lessened. Water spontaneously made ; giddiness, and fell out of bed on attempting to rise.

Repr. pilul. et fiat V. S. ad ζ viii.

2d.—Giddiness much relieved by the bleeding ; no buffy coat, but the coagulum is firm, and much serum separated ; swelling as yesterday, and her symptoms in general have not been severe ; micturition spontaneous ; pulse 100.

Cont. pilul.

3d.—Tension of abdomen again excessive, which she ascribes to potatoe soup at dinner yesterday. Catheter used ; bowels regular ; pulse 96 ; no giddiness.

Rep. pilul. aloes.

Let her have beef-tea one lb. and a bit of steak for dinner daily.

4th.—Belly less tense; decreased about one inch. The dinner of the house has always disagreed with her; complains of rheumatic pains of loins; catheter used; bowels regular; pulse 90; no pain of abdomen.

Rep. pilul. aloes et diæta.

5th.—Dinner soured on her stomach, and was vomited; catheter used; bowels loose; pulse 100, good strength; abdomen as yesterday.

Int. med. et diæta. Capt. tinct. valerian. ammon. ζ i. bis indies. Let her have milk diet.

6th.—Vomited her medicine, as indeed she does every thing except pills; one lb. of water drawn off by the catheter; bowels regular; no giddiness; p. 108, of good strength; abdomen as yesterday.

Int. tinct. valerian. Capt. pilul. aloes et assafoetid. gr. x. bis indies. Cont. diæta.

7th.—Was sick, but did not vomit her pills; abdomen moderately tense; catheter used; much pain of back and sides; pulse 108, natural; bowels natural.

Cont.

8th.—Is better with the milk diet; tension of the abdomen little changed; catheter used; bowels regular; pulse 98, natural; no giddiness.

Cont. omnia.

9th.—Complains of pain in the left iliac region, which seems to affect the muscles of the part; abdomen scarcely so much distended; bowels regular; catheter used; pulse 104, moderate.

Appli. cucurbit. cruent. parti dolent. Cont. alia.

10th.—About 12 ounces of blood were taken by cupping, which relieved the pain; the abdomen is less tumid than it has been observed. Last night got an anodyne draught for pain of stomach, which was relieved, and has not returned. Complains of sickness and headach; slept ill; bowels regular; pulse 108, moderate; perspires freely; tongue whitish. Catam. cessavere.

Int. pilul. aloes et assafoetid. Capt. pilul. aloes gr. x. ad alvum laxand.

11th.—Is affected at present with retching, but vomits only phlegm; swelling of abdomen less tense, and two

inches less than when last measured; pulse 100; made lb.iss. of urine without the catheter.

Int. pilul. aloes. Cont. diæta. Capt. stat. haust. effervesc. et repetr. nausea urgente.

12th.—Vomits her draught, and for two days has had severe headach, general nausea, and disinclination to food; abdomen very much decreased in size, and flaccid; pulse 116, moderate; tongue whitish; great thirst; bowels regular; catheter not used.

Int. haust. efferves. Capt. pilul. colocynth. gr. x. omni bihorio ad plenam catharsin.

13th.—On account of the increase of headach, and the pulse becoming full and hard, and rising to about 130, with considerable febrile anxiety, and pain of epigastrium, she was bled to about $\bar{3}$ xx.; coagulum firm, a little buff on one cup; serum abundant, of a yellow colour; headach relieved by the bleeding, but is inclined to be quiet; slept ill, from general pains; bowels regular; catheter not necessary; abdomen much fallen, and flaccid; tongue white, with considerable thirst.

Capt. mist. salin. $\bar{3}$ ij. ter indies. Let her have butter milk for drink. Cont. diæta.

14th.—Has considerable febrile anxiety, and laments much from general pains, without any organ particularly affected; abdomen is nearly of natural size and tension, and is slightly painful on pressure; menses adhuc fluunt; butter milk causes diarrhœa; slept ill; no sopor; vision weak; pulse 130, moderately full, and compressible; respiration a little laborious; breath warm; tongue white, moist; considerable thirst; no appetite.

Capt. stat. haust. anod.

15th.—Has had a pretty quiet night, and has had two stools since last visit, but takes no food, and has great febrile depression.

Rep. haust. anod. et alia med. necnon habt. vin. rubri Lusit. $\bar{3}$ iv. indies.

16th.—Has great febrile anxiety and languor; face not flushed, but on the contrary lips white; headach not severe, but complains of general pains; two or three almost natural stools; urine nearly natural; slight cough; abdomen natural, and there is no hardness or tumour to be felt in it; no pain on pressing any particular part; no sickness or vomiting; little sopor; slept ill, and laments much; pulse

128, rather full; skin warm, not pungent; respiration accelerated.

Int. vin. Capt. mist. mucilag. acid. ad libit. Hora somni rep. haust. anod.

17th.—Still complains a great deal, but refers the pain to her knees and limbs, and not to any internal organ; sleeps ill; pulse 134, not full, extremely languid; bowels freely opened by an injection; tongue moist, and white; considerable thirst; no sopor or delirium.

Bibat. pot. acid. veget ad libit. Rep. vin. ad $\frac{3}{4}$ vi. indies, et haust. anod.

18.—Got an accidental blow on the head yesterday by the fall of a hammer, which was very painful, and raised the pulse very much. Has some delirium when half awake; slept ill, but her bowel-complaint has been less troublesome since she got her draught; complains less, and lies quiet; takes her wine freely; thirst considerable; tongue moist, and not very white; no appetite; bowels still free; micturition natural; pulse 108 in the morning, at present 140, full; heat increased.

Int. pot. acid. Cont. vin. ad $\frac{3}{4}$ viii. Rep. haust. h. s.

To have half a pint of good tea mixed with a pint of water for drink.

19th.—Has a good deal of sopor and deafness; moaned during the night, but is quiet at present; takes her wine greedily, and is not heated by it; extremely languid and depressed, and unwilling to speak or make any muscular motion; bowels and micturition natural; thirst considerable; some return of appetite; face and lips pale; pulse 128, good strength; heat of skin little increased; no affection of sacrum from lying; no eruption.

Augeat. vin. ad $\frac{3}{4}$ x. Cont. alia.

20th.—Takes her wine readily, but there is some suspicion that she does not get it all; for two nights past her stools have been passed in bed, fluid and copious, but she does not appear insensible; great thirst, but her tongue is moist, and not foul; appetite returns, and she has much less febrile anxiety, but is very deaf; no particular complaint; abdomen perfectly natural, and rather sunk; catheter not necessary; pulse 120, rather weak; heat little increased; no eruption.

Let the night nurse be particularly attentive.

Rep. vin. et haust. anod. Capt. mist. mucilag. acid.
 ℥i. urgent. tussi. Cont. pot. theæ. To have half a
 pint of table broth to dinner.

21.—Had a restless night, and fell out of bed, but without injury; takes her wine and relished her broth; no delirium, but is considerably deaf, and very languid; bowels loose; micturition natural; pulse 120, moderate; heat little increased; tongue moist, and brownish; no sickness; some headach; some cough; moans less; has not taken the draught for two nights.

Rep. haust. Cont. vin. et mist. Table broth and two oranges daily.

22d.—Had a good night, and is almost free from febrile anxiety; appetite returning; thirst considerable; tongue dry, but not parched; cough, with some pain of breast; abdomen flaccid; urine free; bowels natural; pulse 124, good strength, but not full; some perspiration; redness returned to the countenance and lips.

Cont. omnia. To have a little currant jelly.

23d.—Is almost free from febrile anxiety; takes her broth with appetite, and they agree; slept well; little headach; some deafness; tongue clean, and moist; little thirst; bowels regular; urine free; abdomen flaccid; pulse 108, natural fulness and strength; heat natural.

Cont. mist. haust. et vin. Continue the oranges, jelly, and tea. To have a bit of steak instead of the broth at dinner.

14th.—Slept well, and has no complaint but weakness; tongue moist; countenance natural; pulse 100, rather small, but of good strength; functions natural.

Cont.

25th.—Symptoms all decreasing; slept tolerably; pulse 104, small, not hard; appetite returning.

Cont.

26th.—Had some pain of stomach last night, which was relieved by warm water, but her bowels are regular; urine free; and very little febrile anxiety; had a good night, and makes no complaint; pulse 104, good strength; tongue moist; wine does not affect her head.

Cont. med. sed. habt. vin. ℥vi.

27th.—Had a good night; no febrile anxiety; symptoms generally remitting; pulse 112, small; skin moist;

tongue clean ; countenance and lips natural ; little appetite
bowels regular ; urine free ; abdomen flaccid.

Cont.

28th.—Had a good night, and is without febrile anxiety
or any complaint, except occasional cough ; pulse 118,
natural ; bowels and urine natural.

Int. mist. mucilag. acid. et capt. linct. opiat. \bar{z} ss. ur-
gente tussi. Cont. diæta.

29th.—Had a good night ; cough much better ; does
not vomit her medicines ; bowels natural ; pulse 90, natural ;
tongue moist ; heat not pungent ; bowels regular ; urine
free, and whitish ; bad taste of mouth ; slight deafness ; no
tinnitus.

Cont. omnia.

30th.—Has not taken her draught for several nights, as
she thought it caused stupor ; a good night, and in every
respect convalescent ; pulse 124, but she had been up ; ab-
domen regularly bandaged, and shews no tendency to en-
large ; cough much better.

Int. haust. et vin. Cont. alia.

31st.—Was attacked with pain of left hypochondrium last
night, which still continues ; thirst gone ; sat up a little,
but is very weak ; pulse 112, natural ; skin moist ; febrile
anxiety gone ; functions regular.

Applicent. cucurb. cruent. later. Cont. alia.

Feb. 1st.—About \bar{z} vi. of blood only were taken by
cupping, but her side was relieved ; had a good night ;
functions natural ; skin warm, and moist.

Left under the care of the ordinary physician, by whom she was
afterwards dismissed in tolerable health, although the belly was again
somewhat swelled.

No. III.

*Case of severe Fever terminating on the 17th day,
as an example of one of its frequent forms, and
the usual mode of Treatment.*

A. J. Weaver, æt. 18. No. 74 of the Table.

July 13th 1818.—Complains of a constant, severe, and lan-
cinating pain of the whole head, attended with a sense of heat,

giddiness, and occasional deafness, aggravated by motion, coughing, and the erect posture, and becoming worse in the afternoon. He has slight cough and sore throat, and breathes short at times, which he says is done purposely, with a view to relieve the headach. Pulse 100, contracted but not weak in the recumbent; very indistinct, and about 140 in the erect posture; resp. 24; heat 106, pungent. He feels very hot, without rigors or sweating, but his feet are rather chilly. He has no petechiæ; countenance deeply flushed, and rather heavy; eyes not suffused; pupils alternately contract and dilate on exposure to light; tongue moist, with a clear white coat, and clean edges; breath fetid; bad taste; much thirst; no appetite; bowels regular; urine natural. He sleeps ill, with much dreaming, starting, and tendency to delirium. On standing up, he complains of great weakness, increased headach, universal tremor, and pains in his knees. The complaint commenced five days ago, this being the sixth inclusive, with giddiness, debility, and defluxion from the nose, like a common cold. On the 4th and 5th days the symptoms were greatly aggravated, and the headach became severe. The patient can assign no cause for his illness. He lives in the Grassmarket, and is not aware of having been exposed to contagion, unless it could arise from being in company with two convalescents from fever, and has used no remedies.

Statim abradr. capillitium, et applicr. cucurb. cruent. nuchæ. Assidue laventur corpus et caput aqua frigida cum aceto. Vespere utatur pediluvio tepido, et capt. bol. jalap. comp.

14th, 7th day.—About eight ounces of blood drawn by cupping; slept pretty well; three thin motions from the cathartic; no pain anywhere; complains only of giddiness and weakness; pulse 96, strong and full; heat 105, not distressing to himself, though pungent to others; no sweating, shivering, or trembling; eyes more clear; tongue loaded, except at the edges; breath fetid; less bad taste; great thirst; no appetite, deafness, or tremor.

Capt. pil. Eblanenses ii. omni hora donec plene dejecerit alvus. Mittr. sanguis ad unc. xvi. e brachio. Lavetur corpus aqua frigida cum aceto.

Hora 8va, P. M.—Venesection not yet performed. Has had five or six thin offensive motions; complains of great weakness and oppression, but no pain; countenance

much flushed; pulse 106, less strong and full; resp. 21; heat 107, ardent and pungent, yet he does not feel distressed; tongue moist, and of a clear white; little thirst.

Statim fiat venesectio, et adhib. affusio aquæ frigidæ.

July 15th, 8th day.—Blood did not flow freely, 12 ounces drawn without relief; a great many thin motions from two pills; slept ill; complains greatly of weakness, especially about the legs; is dejected and unwilling to be disturbed; no petechiæ; countenance less flushed; eyes slightly suffused; tongue white and moist; no bad taste; much thirst, and some appetite; pulse 104, of good strength; heat 105, less ardent; some sweating this morning; no deafness, giddiness, or tremor; did not like the cold affusion.

Capt. mist. salin. unc. ii. omni bihorio. Lav. corpus aq. frigid. cum aceto.

Hora 8va.—Two or three thin fetid motions, containing light coloured flocculi; very weak; makes little complaint, but is peevish; pulse 112, strong and full; resp. 31, variable; heat 105, ardent, but does not feel himself uncomfortably warm; dislikes the cold washing; face flushed; tongue pure white, but moist; little thirst; some appetite.

July 16th, 9th day.—Slept indifferently, with much dreaming; no motion; pulse 110, strong; resp. 34; heat 105; some cough, which distresses him; other symptoms as last night.

Contr. mist. salin. ℞ Tart. antim. gr. i. Tart. pot. et sod. unc. i. Aq. fontan. unc. vii. Solve. Capt. unc. ii. omni hora ad alv. dejectionem. Applic. vesicator. pectori. Interm. lavat. frigida.

Hora, 8va, P. M.—Three thin greenish offensive motions; continues dosing, oppressed, and peevish; pulse 100, of moderate strength; resp. 37, regular; heat 105.

July 17th, 10th day.—Three thin motions, otherwise natural; was quiet through the night, but says he slept ill; complains of pain of blister, but it has not risen well; tongue moist, but less loaded; still has stupor; much thirst; no appetite; pulse 100, easily compressible, still febrile; resp. 34; heat 102; feels less hot; no deafness, giddiness, or tremor; slight cough, and shortness of breath, but no pain of chest.

Intermitt. medic. Let him have bottled table beer, two bottles daily.

Hora 8va.—Bowels free; discharge offensive; is less op-

pressed; pulse 94, quick; resp. 33; heat 104; countenance less flushed.

July 18th, 11th day.—Blister discharges little; slept pretty well, with some dreaming; three thin yellow and offensive motions; seems very uneasy; complains of much weakness, but no pain; pulse 104, of moderate strength; resp. 30; heat 104, not pungent; countenance slightly flushed; tongue white and less moist; much thirst; little appetite; no deafness or tremor; little cough.

Repet. cerevisia tenuis. Capt. tart. pot. et sodæ unc.
l. ex multa aqua solut. part. vic.

Hora 8va.—Generally better, and less oppressed; cough a little increased; and feet rather chilly; asks for tea.

Statim utatur pediluv. tepid. Let him have tea for breakfast.

July 19th, 12th day.—Slept well; four thin bilious and offensive motions; blister healing; feels better; complains only of weakness, and a little deafness; bowels somewhat uneasy, little cough; pulse 98, full, and slightly dicrotous. Resp. 32; heat 104; feels comfortable—count. natural; tongue moist, and nearly clean; much thirst, and some appetite.

Injici. vespere enema domest. Let him have tea twice a day.

July 20th, 13th day.—Slept pretty well; four offensive motions; enema returned after a considerable time in the bed; feels better, and makes no complaint but of giddiness and noise in his head, with some deafness; pulse 90, nearly natural; heat 104; feels comfortable; countenance a little flushed, but more expressive; tongue still parched in the middle; much thirst; little appetite; some tremor; less peevishness.

Hora 8va.—Pulse 92; resp. 34; heat 105; skin hot; face flushed; tongue clean and moist; much thirst; unwilling to be disturbed.

Adhib. lavatio tepida.

July 21st, 14th day.—Slept pretty well; two motions, nearly natural; makes no complaint, but is still rather peevish, and inclined to dose; pulse 92, strong and full; resp. 30; heat 102½; feels comfortable; tongue clean, and pretty moist; less thirst; good appetite; face flushed; much deafness, and little tremor.

July 22d, 15th day.—Slept well; one offensive motion; very deaf, and still weak; but his countenance is natural, with slight desquamation of the skin; tongue moist, and slightly white; much thirst; good appetite; pulse 90, strong and full; heat 104.

July 23d, 16th day.—Slept indifferently; two nearly natural motions; had some delirium this morning, of which he has now no recollection; makes no complaint, but is very weak and deaf; pulse 94, strong and full; heat 102; feels comfortable; face natural, and slightly flushed; tongue rather dry and whitish; some thirst, and some return of appetite.

Cont. cerevis. tenuis, et capt. mist. sal. ζ ij. ter indies.

Hora 8va.—Had occasional delirium through the day, and doses much; pulse strong and full; skin hot; face flushed; much deafness; good appetite; slight epistaxis.

Applic. statim hirud. 12 temp. Adhib. lavatio frigida vel tepida prout ægro gratius erit.

July 24th, 17th day.—Leeches acted well; slept well, but continues delirious at times; deafness diminished; face less flushed, and says he is quite easy; four very thin offensive motions; pulse 92, still strong, but less full; heat 102; tongue moist, but white; much thirst; good appetite; and a little tremor.

Capt. pulv. antimon. gr. 3. omni hora, donec plene dejecerit alvus. Contin. lavatio frigida vel tepida.

July 25th, 18th day.—Slept well, and had no delirium since yesterday's visit; two thin offensive motions; feels better; no complaint but weakness; face paler and more natural; pulse 68, less strong; heat 99; resp. 22; tongue white and moist; less appetite, and deafness; little tremor.

Repet. pulv. antimon. Interm. lavatio.

July 26th, 19th day.—Slept well; functions natural, and symptoms declining; complains more of debility, and has lost much flesh; wishes for meat.

Contin. diæta.

July 27th, 20th day.—Slept well; one natural motion; complains only of weakness; pulse 56, natural temp. comfortable; tongue moist, and very slightly white; no thirst; good appetite; wishes for meat; deafness going off; no tremor. Contin. diæta.

July 28th.—Slept well; wishes to be permitted to rise; pulse 56, natural; other functions regular.

Capt. elect. laxant. dr. 1. omni hora ad. alv. solvend.

Let him have a little meat for dinner.

July 29th.—Slept indifferently; bowels confined; pulse 52; deafness going off; countenance nearly natural. He may be allowed to rise.

Capt. elect. laxant. dr. 1. omni hora ad alv. leniter solvend.

July 30th.—Four motions more natural than formerly, from four spoonfuls of electuary; slept well; no complaint but weakness, which is considerable, but his muscles are getting firmer; was up a little yesterday; pulse 56, strong and full; tongue quite clean and moist; no thirst; good appetite; little deafness; no tremor.

Interm. elect. laxans. Contin. diæta.

July 31st.—Slept well; pulse 52; functions natural; was not up yesterday, but will rise to day.

Continue.

Let him be remitted to the ordinary physician.

No. IV.

Case of severe Fever, with Petechiæ and yellowness of Skin, successfully treated with Leeches and Venesection, and terminating about the 8th day.

J. C. Ostler, æt 23. No. 72 of the Table.

July 9th, 1818.—Complains of general uneasiness, and sense of constriction, chiefly in the lower extremities, and of a constant lancinating pain, and sense of heat, around the front of the head, relieved by the recumbent posture, and when severe, attended with a degree of deafness. Pulse of good strength and size, but slightly dicrotous, 92 in the recumbent, 110 and weaker in the erect posture. On standing for a short time he is affected with fainting and vertigo. Resp. 18; heat 101. He has occasional shivering and sweating, but feels at present comfortable, and his feet are rather chilly. A few petechiæ are scattered over the trunk of the body. Countenance perfectly natural; eyes

somewhat suffused; tongue parched, and yellowish in the middle, clean and moist at the edges; no bad taste; little desire for drink, except to moisten his mouth, which is dry and hot; no appetite; bowels open from purgative medicine; urine natural. He sleeps ill, and feels very weak, but has little tremor.

The complaint commenced five days ago, this being the 6th inclusive, with headach, drowsiness, and vomiting of a watery fluid. He took to his bed that evening, and the next day became much worse, with general uneasiness, heat, thirst, and sore throat; since which he has had regular medical assistance.

On the second day he took an emetic, which operated slightly, and produced no apparent advantage. The sore throat subsequently subsided, but he had vomiting the next two days, excited by drinking. His bowels have been kept open by purgative medicine.

The patient lives in the Grassmarket. He can assign no cause for the disease. Is not aware of having been exposed to contagion, and previously enjoyed good health.

Applic. statim hirud. xii. temporibus.

10th, 7th day.—Only seven leeches fastened, which relieved his headach, and to day it is much less. Slept ill; bowels confined. Complains chiefly of general weakness and uneasiness, with pain in the calves of his legs. Pulse 78, strong, full, and slightly dicrotous; resp. 19; heat 100; feels comfortably warm, but had a little shivering through the night; some petechiæ on the trunk and limbs of a purple colour; countenance flushed; eyes suffused; tongue dry and yellowish in the middle; much thirst; no appetite; some deafness and confusion; little tremor; no pain of side; little cough.

Fiat venesect. ad. unc. xii.

Capt. pil. purg. Eblan. omni hora donec dejecerit alvus.

Hora 8va.—General relief from the bleeding; headach and deafness nearly removed. Took eight pills; two vomited; no motion; pulse 92; heat 101.

Capt. statim bol. jalap. comp.

11th, 8th day.—First cup of the blood drawn yesterday has little serum and no buffy coat; second cup little serum, and a yellow buffy coat, almost one-eighth of an inch thick; slept pretty well; many fluid motions; urine copious and

high-coloured; much better, and complains only of weariness, and pain in small of back; pulse 82, strong, full, and rather dicrotous; resp. 17, full; heat 101; some yellowness of skin on the trunk; countenance flushed; eyes suffused; tongue foul; some thirst; no appetite; no deafness or tremor.

Capt. mist. salin. unc. ij. omni triborio.

12th, 9th day.—Slept well; three thin motions; complains only of weakness; deafness gone; yellowness of abdomen continues; some petechiæ on the arms; countenance flushed; eyes less suffused; pulse 72, full and strong; heat 99; tongue slightly dry and whitish; little thirst; some appetite. Contin. mist. salin.

13th, 10th day.—Slept well; one motion; no complaint but weakness, and is getting stronger; yellowness of abdomen, and petechiæ disappearing; pulse 66, full and strong; heat 100; feels comfortable; countenance nearly natural, but a little flushed; tongue moist and whitish; no thirst; some appetite. Contin. mist. salin.

14th, 11th day.—Slept well; petechiæ gone; yellowness still visible; pulse 64; heat natural; no complaint but a little weakness. Continue.

15th, 12th day.—Has no complaint, and even little debility; pulse 70, sitting. Continue.

16th, 13th day.—Convalescent.
Let him be dismissed.

No. V.

Case of severe Fever, with yellowness of Skin, successfully treated by Venesection and Leeches, and terminating on the 7th day.

M. T. Maid-servant, æt. 25. No. 88 of the Table.

June 27, 1818.—Complains of pain in forehead and loins; some vertigo on rising; some cough; no pain of chest; tongue whitish, but moist; some thirst; pulse 116, full; heat 103; skin hot, but not very dry; perspires occasionally; bowels regular.

Headach came on two days ago, accompanied with nausea, but no vomiting, and rigors succeeded by sweating; has

had some cough for several years; yesterday took three opening pills, which operated once; has not been exposed to the contagion of fever.

Statim. fiat venesect. ad ℥xvj . Cap. pil. aloet. ijj .

Habt. pot. acid. veg. pro. pot. com.

28th, 3d day.—Eighteen ounces of blood drawn, not sily, and with little separation of serum. It relieved the loins, but not the head; pills operated once; headach worse; vertigo on rising; pulse 120, full; heat $102\frac{1}{2}$; skin covered with a copious perspiration; tongue white, at present moist; face flushed; headach prevented sleep; much thirst; pot. acid. said to be too sweet.

Applic. temp. hirud. 12. \mathcal{R} Sulphat. magnes. unc. 1.

Tart. antimon. gr. 2. Aquæ unc. 8. Solve. Capiat. partitis vicibus.

29th, 4th day.—Twelve leeches applied, with great relief of head; slept ill from nausea and thirst; took one dose of the saline mixture, which produced five motions, and vomiting of a green bitter liquid; pulse 114, natural strength; heat 102; skin moist, but perspiration less copious; very little headach.

Intermitt. medicamenta. Habt. pro potu aquam fontanam acido muriatico acidulat. ad libitum.

30th, 5th day.—Catamenia adsunt. Bad night from severe return of headach; pulse 108, of good strength; heat 102, not pungent; less perspiration; tongue whitish, and dry; much thirst, and a very bitter taste; several loose motions.

Intermitt. medicamenta. Applic. hirud. 12 temporibus.

July 1, 1818.—Twelve leeches applied, with immediate relief; fore-part of the night good, but slept indifferently towards morning from thirst; slight headach; tongue white and dryish; much thirst; pulse 114, strong; heat 103; less perspiration; numerous motions, without tormina; skin and albuginea slightly yellow.

Abrad. capillitium. \mathcal{R} Calomel gr. 3. Opii gr. $\frac{1}{2}$.

Misce. Capt. bis indies forma pilulæ.

2d, 7th day.—Catamenia disparuere. Took two pills, and had two motions without tormina; head shaved; no headach; good night, with much perspiration; tongue foul, but not so dry; less thirst; pulse 84, of good strength; heat 96; yellowness very slight, and confined to the expos-

ed parts of her body ; says her skin was yellow for three or four years after having had jaundice, but has not been yellow for five or six years past.

Repet. pil. calomel. et opii.

3d, 8th day.—Slept well ; tongue whitish, but not dry ; bad taste ; little thirst ; pulse 78 ; heat natural ; two motions offensive.

Interm. pil. calomel et opii. Capt. pil. purg. Eblan. 2.

4th.—A good night ; feels much better ; yellowness of skin gone ; pulse 90, of good strength ; tongue clean and moist ; no thirst ; bowels regular.

Intermitt. pil. Capt. mist. sal. amm. \bar{z} ij. omni trihorio.

5th.—Makes no complaint, and continues better ; functions regular ; slight appearance of desquamation on the face.

Continr. mist. salin. ammon.

6th.—No complaint but weakness ; pulse 110, sitting ; functions regular.

Intermitt. medicam. Habt. vin. rub. unc. 4. et juscul. bovin. lb. 1. indies.

8th.—No complaint. Let her be dismissed.

No. VI.

Case of Fever in which repeated Venesection was employed, with decided benefit, in a very advanced stage of the Disease.

J. M'L. Labourer, æt. 26. No. 25 of Table.

Jan. 16, 1818.—Is affected with much general debility ; rigors alternating with heat ; headach, with throbbing of the temples and vertigo ; cough at times, with some expectoration, and pain of breast, of abdomen, and limbs ; pulse 126 ; tongue foul ; appetite bad ; thirst urgent ; bowels open from medicine ; urine free, but high-coloured ; skin rather pungent ; sleeps ill ; fifteen days ago began to be affected with the usual symptoms of fever. Brought a patient into the house three weeks ago, labouring under fever. Has only had some gentle laxatives.

Ft. V. S. ad ℥x . Habt. h. s. haust. anod. ant. cras
mane capt. solut. tart. sodæ et potass. antimon. ℥iv .
2nda quaque hora ad alvum laxandam.

17th.—Only about ℥ix . of blood obtained, as he became faint; the portion last drawn shews a slight buff; complains only of giddiness; tongue white, but moist; bowels opened; pulse 116, vibratory; skin slightly warm.

Rep. solut. sodæ antimon. et haust. anod. ant. h. s.

18th.—His headach increased, and his pulse rose in strength and frequency after the visit, for which he was bled to ℥xij . with immediate relief, and he has continued easier ever since; proportion of serum natural, and no buffy coat; at present makes no complaint; face flushed; pulse 92, good strength; skin warm, slightly pungent; tongue moist, clean at the edges; two stools from some of his saline solution; micturition natural; sleeps well.

Capt. mist. salin. amm. ℥ij . omni trihorio.

19th.—Had a good night; bowels opened; complains only of thirst and bad taste; no eruption; pulse 90; full and dicrotous.

Cont. omnia. Pot. acid. veget. ad libit.

20th.—Complains only of bad taste of mouth, and pain of body; no deafness or confusion of thought; no sopor, but sleeps well in the night; bowels rather costive; pulse 82, full; heat increased.

Int. mist. salin. et Capt. infus. sennæ ℥ij . omni hora
ad plenam catharsin. Cont. pot. acid. veget.

21st.—Medicine operated freely; bad taste of mouth continues; pulse 90, full, and slightly dicrotous; countenance less flushed; skin soft; heat not increased; no deafness or sopor; sleeps well, and makes no complaint.

Int. inf. sennæ. Cont. pot. acid.

22d.—Complains much of general soreness and great thirst, but refuses all drink except water; no deafness or sopor; pulse 90, good strength; heat little increased, but somewhat pungent; face flushed; tongue white and moist; bowels regular; urine free.

Int. med. Capt. h. s. haust. anod. ant. Two
oranges daily.

23d.—Bowels costive; makes no complaint, but is dull; tongue and lips rather foul, but not parched; pulse 100, good strength; heat rather increased.

Int. haust. anod. Capt. sulph. sodæ \mathfrak{z} i. Oranges.

24th.—Tinnitus aurium; pulse 92, rather sharp; tongue still white; still much thirst; sleeps indifferently; bowels opened by the salts.

Int. med. Capt. haust. anod. ant. Cont. diæta.

25th.—Sleeps well, and feels stronger; appetite returning; pulse 96; bowels regular.

Cont. omnia. One lb. of beef-tea to day, and daily.

26th.—Complains only of thirst; tongue moist; no deafness; pulse 100, natural; bowels natural.

Cont. haust. anod. et diæta.

27th.—Slept well; tongue moist, but whitish; pulse 110, full, and soft; skin not pungent.

Cont.

28th.—Convalescent.

Steak to day, and daily.

Feb. 1.—Dismiss to-morrow after breakfast.

No. VII.

Case of Pulmonic Fever mistaken in the Commencement for Pleurisy, and successfully treated as such.

J. R. æt. 26.

March 27, 1817.—Complains of severe pains extending from one hypochondrium to the other, and darting upwards; also of dyspnœa and cough, with slight expectoration; and on full inspiration the above mentioned pains are greatly aggravated.

Appetite impaired; thirst great; sleeps ill; belly regular; pulse 100, moderately full.

Has been bled, but is ignorant to what extent, and has used no remedies.

Mitt. sanguis e brachio ad \mathfrak{z} xiv. Capt. statim. pulv. jalap. comp. \mathfrak{z} i.

28th.—Fainted during the operation of bleeding, when the pain remitted and has not returned; blood not buffy; belly freely opened by the jalap; slept well; face flushed; tongue white, great thirst; pulse 100, full; skin very hot, and covered with a copious perspiration,

Rep. V. S. ad ζ xvi. et bibat. pot. acid. veget. ad libit.

29th.—Not more than ζ ix. of blood could be got; blood not buffy; feels better; face less flushed; pulse 108, full; skin warm; tongue clean; much thirst; bowels loose.

Habt. pot. acid. veget. lb. iv. indies.

30th.—Makes no complaint but of thirst, but has some deafness, which he says came on since admission; tongue white; bowels loose; pulse 98.

Capt. haust. ex. oleo. ricini.

31st.—Convalescent; pulse 94. Continue.

April 1st.—Head has some appearance of being affected. He is considerably deaf, requires some time to recollect himself; has a hesitation in his speech, and is unsteady in his gait; says these circumstances are not natural to him. His florid colour is gone, and his abdomen is large and has a pasty feel; pulse 100; moderate strength.

Abradatur capill. et lavetur caput tinct. cantharid.

Capt. pil. aloes. et gambog. gr. x. omni trihorio ad catharsin.

2d.—Fatuous appearance rather increasing; bowels very loose, but still tumid; pulse 98; considerable difficulty of breathing, especially in the recumbent posture.

Int. pil. Capt. tinct. scillæ gr. x. quater indies. Let him have a bit of meat to dinner daily.

3d.—Is very deaf, and slow in answering questions; pulse 106.

Cont. tinct. scill. et applic. vesicat. capiti.

4th.—Blister rose well, and he is better; functions regular; pulse 100.

Curetur pars exulcerata ungt. sabinæ.

5th.—Issue discharges well; belly still tumid.

Cont. med. et capt. pil. aloes. et gambog. gr. x.

6th.—Medicine operated but gently; issue has discharged much, but now less. He has still a tottering gait, but his hearing is much improved, and he is much more distinct; pulse 96.

Curetur ulcus ungt. pulv. canthar. Rep. pil.

7th.—Seems to improve, but complains of weakness; abdomen still stuffed, but scarcely so large as before; pulse 92; tongue white.

Cont. med. et capt. pulv. cinch. $\frac{5}{8}$ ss. ter indies.

8th.—Continues to recover. Pulse 120

Cont. med. To have a bottle of porter daily.

9th.—Convalescent; still some deafness and hesitation of speech; pulse 112. Continue.

10th and 11th.—Pulse 110; recovers. Continue.

12th.—Perspires very freely this morning; pulse 106.

Continue.

14th.—Recovers in every respect; belly not so hard; pulse 100.

Cont.

15th, pulse 100; 16th, pulse 96; 17th, pulse 96; 18th, pulse 94.

20th.—Dismissed cured.

No. VIII.

Case of Pulmonic Fever, with Hæmaturia, successfully treated by Depletion.

R. C. Servant, æt. 35. No. 21 of Fever Table.

Jan. 2d.—Complains of occasional flying pains through his head, with tinnitus aurium and vertigo on attempting to walk; pain and general oppression about the chest, increased by cough, full inspiration and pressure, and attended with a viscid white expectoration; is also affected with occasional rigors, alternating with heat; great languor, and unwillingness to be disturbed.

Pulse 88, full; tongue furred at its base; moist at its apex, with bad taste of mouth; appetite bad; thirst considerable; bowels open from medicine, but previously bound; urine scanty, of a deep red colour, retained with great difficulty, and, while passing, occasioning considerable pain; skin dry and pungent; respiration rather hurried; sleeps ill.

On Thursday week, December 25, was seized with alternate rigors, and flushings, headach, and the other symptoms, which continued unabated until he came here, but since which he thinks himself easier; has never been in the way of contagion from fever, and says he was much

exposed to cold and wet on Monday week, December 22, while shooting, which he assigns as the cause of his illness ; has used no remedies except a few laxative pills two days ago, which operated well, but did not at all relieve his symptoms.

Applic. vesicat. pector. et capt. mist. mucilag. acid.
 ζ ij. urgente tussi.

3d.—Blister has risen ; breathing better ; urine bloody, and precipitated by infusion of galls, retained with difficulty, and made with pain ; pulse 112, soft.

Capt. sulph. sodæ ζ i. Cont. mist. mucilag.

4th.—Urine still bloody, and gives a curdy precipitate, with infusion of galls ; made without pain ; some lightness of head ; breathing quick ; pulse 110 ; moderate ; tongue furred ; salts operated well.

Mitt. sang. ad ζ viiij. Int. sulph. sod. Bibat. pot.
 acid. mineral. ad libit.

5th.—Blood separated much serum, and shewed an appearance of buff ; urine still coagulated by the galls, but made without pain ; no headach ; breathing natural, and makes no complaint ; pulse 104, febrile ; skin warm ; tongue white, slightly parched.

Capt. mist. salin. amm. ζ ij. omni trihorio. Cont.
 pot. acid.

6th.—Urine no longer bloody, but deposits a very copious sediment, and coagulates with galls ; expectoration has all along been tinged with blood ; slept well ; makes little complaint, but has much cough ; pulse 100, moderate ; tongue parched, not foul ; bowels regular.

Cont.

7th.—Good deal of sopor ; some cough ; no headach ; bowels regular ; urine natural colour ; deposits a copious lateritious sediment, and is precipitated by galls ; made without pain ; pulse 86, febrile, but not strong ; skin warm, not pungent ; tongue slightly parched ; sleeps well.

Rep. mist. Capt. h. s. haust. anod.

8th.—Is more refreshed to day ; no complaint of breast or urine ; urine not bloody, but deposits a copious sediment, and is precipitated by galls ; thirst considerable ; tongue moist ; pulse 102, moderate ; skin warm, but not parched ; slept well ; expectoration apparently purulent, but not tinged with blood.

Cont. medicam.

9th.—Fever apparently gone; very little spitting; no blood; tongue moist; pulse 80, moderate, soft; sleeps well; less thirst; bowels regular.

Cont.

10th.—Convalescent and asks for steak.

Cont.

11th.—No cough; urine natural; complains only of weakness; pulse 84, good strength; moderate thirst; little expectoration, not bloody; respiration free.

To have milk instead of beer. Cont. alia.

12th.—No complaint; appetite returns.

To have a bit of steak daily. Interm. med.

13th.—Convalescent.

Cont.

14th.—Recovers well.

Cont.

15th.—Dismissed cured.

No. IX.

Case of Cephalic Fever, with Maniacal Delirium, succeeded by obstinate Headach, and an Eruption of Lichen Simplex.

J. F. Policeman, æt. 26. No. 17 of Fever Table.

Dec. 16th.—Complains of severe fits of cough, occasioning, while they continue, some degree of vertigo, and attended with expectoration of a thin white matter; complains also of considerable nausea and much general debility.

Pulse 113, not very full; tongue white and parched; appetite bad; belly bound; surface pungently hot; thirst and respiration natural; sleeps well, but at times disturbed with startings; was dismissed from the hospital about a fortnight ago a convalescent from fever; and after being exposed to fresh cold, his former symptoms recurred. His house is dry and airy, and he has never been in any way exposed to contagion of fever.

Has taken four powders, the nature of which he is ignorant of, which made him very sick, but produced little vomiting, and afforded no relief of symptoms.

17th.—Has no headach or pain of back ; some cough ; no thirst ; tongue white but moist ; some appetite ; bowels regular ; urine free ; slept tolerably ; skin moist, warm.

Capt. stat. pulv. ex calomel gr. v. et pulv. antimon. gr. iij. Capt. h. s. haust. anod. antimon.

18th.—Pulse 126 ; heat 99 ; tongue white ; great thirst ; some muttering in his sleep ; bowels regular.

Rep. pulv. ut heri. Int. haust. anod. et lavet. caput aq. et aceto.

19th.—Complains only of weakness ; tongue whitish ; pulse 126, but he had been up.

Int. med. Let him have tea twice a day.

20th.—Had much delirium for some nights past, and confusion of thought in the day ; heat 100 ; pulse 100, moderate ; tongue white ; skin moist ; two stools.

H. S. cap. haust. e tinct. lactucarii gtts. L. lavet. caput assidue aq. frigid. et aceto.

21st.—Has considerable delirium ; pulse 122, small ; tongue clean ; bowels regular ; skin not hot.

Int. omnia. Habt. vin. rubri Lus. \bar{z} vi. indies. Applicr. vesicat. capiti.

22d.—Was very troublesome in the night, and attempted to pull some of the other patients out of bed ; ideas confused even when awake ; eye unsettled ; is free from fever, although his pulse is variable ; functions reported regular.

Int. med. et \bar{R} ol. volat. terebinthin. \bar{z} i. Sacch. albi. \bar{z} i. tere. simul, et inter. terend. adde aq. menth. piperit. lb. i. ft. emuls. cujus capt. \bar{z} i. ter indies. Let him be removed to the private room for furious patients.

29th.—For three days after his removal the delirium continued unabated, although the functions remained perfectly natural ; since that time he has gradually recovered ; used the antimonial powders, and an anodyne linctus for some cough.

Quite collected now ; tongue clean ; thirst moderate ; bowels rather costive.

\bar{R} Calomel gr. v. pulv. antimon. gr. iij. M. Capt. bis indies nisi superven. catharsis. Habt. mist. mucilag. acid. urgent. tussi.

30th.—Quite collected ; tongue rather white ; pulse 92 ; one stool only ; skin rather warm.

Cont. pulv. calomel et antimon. et mist. mucilag.

31st.—Passed a good night; tongue clean; pulse 100, full, and slightly dicrotous; bowels costive.

Int. pulv. Cont. mist. Capt. sulph. sodæ \bar{z} i.

Jan. 1st.—Salts had effect; mind quite collected; breath still warm; pulse 100, full; recovers strength, and slept well.

Cont. mist.

2d.—Natural copious stool this morning; sleeps well; no confusion, but has pain of head when he coughs; pulse 100, full.

Cont.

3d.—Complains of headach in the left parietal region, increased on coughing; pulse 94, rather bounding; appetite good; bowels regular.

Int. vinum. Cont. mist. mucilag. acid. Appli. hirud. viij. tempori sinist.

4th.—Four of the leeches bled well, but have not relieved his headach; pulse 90, full; slept well; bowels regular; tongue whitish, moist.

Mitt. sang. ad \bar{z} xij. Cont. mist. mucilag. acid.

5th.—Headach gone since he was bled; blood separated much serum, and no buffy coat; slept well; bowels regular.

Cont. mist. mucilag. acid.

6th.—Has some return of headach, and slept tolerably; pulse 96, still full; bowels regular; tongue clean.

Applicet. vesicat. parti capit. dolent. Capt. pulv. antim. gr. iij. ter indies.

7th.—Headach gone; a good night; blister risen; pulse 106, full; bowels costive.

Rep. med. addend. cuique dosi pulv. antim. calomel. gr. v. nisi superven. catharsis.

8th.—Bowels loose; no headach; an itchy papular eruption on the neck and breast; sleeps well; functions natural.

Lavet. eruptio. solut. sulphuret. potass. Cont. alia.

9th.—Sits up; return of appetite; no headach; pulse natural.

Rep. solutio. Int. alia. A steak to-day, and daily.

10th.—Eruption going off; pulse at present 120; otherwise convalescent.

Cont.

11th.—Makes no complaint, but his pulse is 128, and of

good strength; eruption almost gone; bowels regular; sleeps indifferently.

Capt. h. s. haust. anod.

12th.—Has slight occasional headach of left side; pulse 112 and full, when lying in bed; bowels costive; eruption declining.

Int. haust. anod. Cont. solut. sulphur. potass. Capt. solut. arsenit. potass. $\mathfrak{z}\text{ij}$. bis indies.

13th.—Has only occasional slight headach; pulse in bed 88, not full or throbbing; bowels costive.

Cont. med. Capt. pulv. antim. gr. v. omni hora ad catharsin.

14th.—No complaint except of his medicine; pulse in bed 82, not full.

Int. solut. arsenic. Cont. solut. sulphur. potass. et pulv. antimon. Double allowance of bread.

16th.—Has some return of headach, especially at night; pulse in bed about 80, when up 112.

Applicet. vesicat. pone aurem sinist. Cont alia.

17th.—Blister risen well, which relieved his headach generally, but since he rose complains of pain in a small spot over the eye; eruption quite gone; pulse 100, moderate strength; functions natural.

Int. med. Fiat ulcus perpetuum pone aurem sinist. Cont. diæta.

18th.—Headach gone; only weak; pulse 106, moderately full and strong.

Cont. ulcus et diæta.

19th.—No headach; pulse 94, natural.

Cont.

20th.—Dismiss. Cured.

No. X.

Case of severe Pulmonic Fever terminating fatally on the 6th day.

J. L. Shoemaker, æt. 33.

Dec. 31st 1817.—Complains of severe pain of head, with tinnitus aurium and vertigo, and intolerance of light, soreness of throat on deglutition, pain of breast and epigastrium,

with a sense of oppression and tightness about the præcordia, which he says is much aggravated by pressure and taking food, and is at times attended with considerable nausea and vomiting. Is also affected with cough, which increases very much the complaints of his head, throat, and breast; great lassitude, and general debility; look anxious; respiration oppressed; pulse 114, rather full; tongue foul; appetite bad; thirst considerable; belly and urine natural, surface somewhat pungent; sleeps ill.

Was seized on Sunday evening, Dec. 28th, with severe gripes and diarrhœa, which ceased yesterday. Was also seized at the same time with headach, and the other symptoms as at present. Does not know that there was fever in his neighbourhood, and attributes his complaints to exposure to cold and wetness. Has used no remedies.

Applicet hirud. viij. temp. Capt. mist. mucilag. acid. urgent. tussi, et bibat. decoct. aven. libram indies;
Cras mane capt. solut. tart. sod. et potass. antimon.
ʒiij. omni bihorio ad catharsin.

1st, 5th day.—In the waiting-room was very ill, but was relieved by vomiting; walked to the ward with assistance, but his knees frequently bent under him. At eight in the evening he had confusion, as if from intoxication, and gave some account of his symptoms, but assented to every one suggested to him. The leeches were applied about 8 last night, and bled freely, and the solution gave him two stools. At 10 he got a drink of water, and has not since been able to speak. He now lies in a state of total insensibility, with laborious breathing, and occasional moaning; respirations 40 in the minute; inspiration quick, expiration slower; pupils contracted, though not exposed to light; limbs flaccid and motionless; pulse 120, rather full.

Capt. stat. sulph. zinci ʒi. ex aq. ʒi. et applic. vesicat. ampl. pectori necnon injic. enema purgans.

2d, 6th day.—The emetic and injection were given, and the blister applied, but all without effect, and he died before 5 o'clock in the evening, without any change of symptoms.

Dissection.

The veins accompanying the branches of the middle meningeal artery on the left side were larger than usual, and very turgid with blood. Between the arachnoid membrane

and pia mater, there was a copious effusion of serous fluid, which over the anterior left lobe, and the upper and posterior part of the right hemisphere, were tinged of a blood red colour. The ventricles contained about $\frac{3}{4}$ ss. of a clear and colourless watery fluid. The substance of the brain was every where of a natural structure. Both lungs throughout the greater part of their substance were loaded with a serous fluid, which gave them the consistence of soft spleen. There was no effusion, however, into either cavity of the pleura. The heart was of a natural size, form, and structure; in the pericardium there was $\frac{3}{4}$ ss. of a slightly reddish fluid.

The viscera of the abdomen were all in a healthy state.

J GORDON, M. D.

No. XI.

Case of Anomalous Fever terminating fatally on the 9th day.

MARY SMITH, æt. 31. Married.

July 2d.—Complains of severe pain at scrobiculus cordis, lower part of sternum, and under the left mamma, which prevents full inspiration, and is much increased on coughing; also of much pain of head and loins, with some vertigo; has occasional vomiting, particularly after taking any thing; a troublesome cough and difficult expectoration; tongue nearly clean, but rather dry; some thirst; slight sore throat; pulse 120, rather weak; respiration 35; heat 102, rather pungent; occasional alternations of temperature; bowels not open for three days; some deafness; small petechiæ over the whole body except the hands and face.

Was seized three days ago with rigors, succeeded by heat, nausea and vomiting; also with pain of the chest, back, and head; has had a cough for a long time; does not know exactly when the petechiæ appeared.

Was exposed to the contagion of fever about six weeks ago; has used no medicines.

Stat. fiat venesect. ad $\frac{3}{4}$ xij. Capt. submur. hyd. gr. iij.
pulv. jal. comp. $\frac{3}{4}$ ss. et cras mane infus. sen. ad plenam catharsin.

3d, 4th day.—Twelve ounces of blood drawn, which relieved the pain of head and breast; blood coagulated without separation of serum or buffy coat; medicine operated very much; slept well; less pain of chest and headach; pulse 120, very weak; tongue whitish; less thirst; heat 104, not pungent; respiration short, and rather difficult; thorax on percussion sounds well, except at the lower part to the left of the sternum, where it seems to cause pain; some nausea and some vomiting.

Ap. cucurb. cruent. sterno. ad ℥xvj . et cap. tinct. digit. gt. x. ter indies.

4th, 5th day.—Thirteen ounces of blood got by cupping, but she says without relief, although she now complains chiefly of the bowels; slept better; pulse 120, very weak; respiration 32, apparently difficult; heat $102\frac{1}{2}$, not pungent; one motion last night; tongue white, but moist; much thirst; bad taste; nausea; dry cough.

Intermitt. medicamenta. Capt. statim. haust. ex. ol. ricini. et hor. som. haust. anod. ant.

5th, 6th day.—Medicine operated well, and her complaints are all relieved.

Intermit. med. et capt. tinct. rhœi et aloes ℥ss . bis indies.

6th, 7th day.—Two loose dejections yesterday afternoon; had a cold clammy sweat, and about 10 P. M. much singultus, which went off and returned about 11.

\mathcal{R} Sp. lav. comp. ℥ss . æth. sulph. suc. cit. med. āā ℥ij .

Capt. ℥ss . et rep. omni semi hora urgente singultu.

Two or three doses of mixture removed the hiccup; since two this morning she has not spoken; pulse not distinct; skin cold and clammy; tongue not foul; much thirst; points to the scrobiculus cordis as painful; has frequent eructation; is perfectly sensible, and able to move her arms and legs strongly, although she generally lies with her knees drawn up; countenance is not much changed, though her eyes look stronger.

\mathcal{R} Sp. æth. nit. ℥i . tinct. op. gr. xx. aq. menth. pip. ℥i . ft. haust. stat. sumend. \mathcal{R} Sp. vin. Gal. ℥ij . Capt.

℥ss . ex aq. calidæ ℥i . omni hora. Injic. enema foetid.

7th, 8th day.—Was better for her draught after yesterday's visit; took the brandy and water readily, and had a quiet night. About ten last night began to speak, and she now speaks with a strong voice and perfect articulation;

complains of pain in her head and belly, and the epigastrium is exceedingly sensible to pressure ; occasional nausea, with yawning and eructation ; pulse scarcely to be felt, about 120 ; has generally a cold clammy sweat over the whole body, but her feet continue warm ; tongue foul ; much thirst ; no dejection.

Rep. haust. ut heri. R Sp. vin. Gal. ℥ii. aq. menth. pip. ℥viii. Capt. ℥ss. omni hora. Nisi dej. alv. injic. en. dom.

8th, 9th day.—Injection given without effect, and the draught and mixture were taken. About nine last night more dejected. Gradually declined, and quietly expired about half after three in the morning.

Dissection.

The cavity of the spinal canal was laid open by sawing the spinal plates forming the posterior wall of the cavity as far down as the 3d or 4th lumbar vertebræ. Through the whole of this course, the spinal chord exhibited no appearance which could with confidence be considered morbid. Drops of blood, in considerable numbers, appeared *passim* on the theca and neurilema ; but, as these were the result of the rupture of the connecting vessels, and as these vessels, from the supine position of the body, both during life and after death, might be distended in every case, no positive inference could be drawn from this circumstance. One part, opposite to the 1st, 2d, and 3d dorsal vertebræ, was, in the opinion of one of the gentlemen present, more vascular than usual ; this, when removed from the body, was sponged with water, but no decided or unequivocal appearance presented. The cavity of the cranium was laid open by sawing through a great part of its posterior wall, chiefly the occipital bone. The base of the brain presented some effusion of serum, but very slight, and there was almost none on the superior surface of the hemisphere. The ventricles being laid open, appeared healthy, the vessels between the epithelion and cerebral substance, only being more distinct than usual. Nothing morbid occurred in the cavity of the abdomen ; the liver and spleen seemed healthy, but three biliary concretions of a tetrahedral form were found in the gall-bladder. The kidneys, ureters, and urinary bladder, presented nothing unusual.

DAVID CRAIGIE.

No. XII.

Case of Fever terminating fatally on the 14th day, with Apoplectic Symptoms.

J. A. Wright, æt. 30. No. 65 of Fever Table.

June 14, 10th day.—Is affected with pain of forehead, tinnitus aurium, and severe pain under the sternum, which is increased by coughing, or taking a full inspiration; also with much pain in the lower part of the abdomen, which is increased by pressure; he has a troublesome cough, with but little expectoration; bowels open, but some tormina; tongue white and dry; much thirst; pulse 100, rather weak; heat 103; surface feels hot and dry.

About ten days ago was seized with severe headach, general uneasiness, and nausea. A few days ago had much sweating, which seems to have been excited by artificial means, but without relief. His bowels have been kept open by purgatives from the first; has used an emetic with but little relief. Yesterday he was greatly relieved by bleeding; the blood is reported to have been sisy.

Thinks his complaints may have been caused by being exposed to a shower when under a profuse sweat.

Statim fiat venesect. ad \bar{z} xvi. Vespere injic. enema domest. Capt. cras mane sulph. magnes. \bar{z} ss. Adhibeantur semicupium et lav. tepid. urgente calore. Habt. pot. acid. veg. pro potu communi. Ap. empl. vesic. sterno.

15th, 11th day.—Much relieved by bleeding; blister did not operate well; much relieved by enema and semicupium; one motion from the cathartic; pain of abdomen gone; pain of pit of stomach alleviated; pain of chest much felt on full inspiration; cough, expectoration, headach, affection of tongue the same; p. 116, stronger; heat 103; blood very slightly sisy.

Capt. submur. hyd. gr. i. opii gr. ss. forma, pil. quarter indies. Rep. enem. emol. vespere semicupium, et nisi fia tussis et dolor pectoris iterum repetat. venesect. ad \bar{z} xvi. vespere.

16th, 12th day.—Slept well; no headach; much thirst; no pain of breast felt, except on very full inspiration; no pain of abdomen; p. 116, weak; heat 105; enema not

given. Syncope after the semicupium, but thinks himself better for it. No dej.

Rep. enema, semicup. pil. submur hyd. Utatur mist. mucilaginoso.

17th, 13th day.—Slept much and is drowsy; talks in his sleep; makes no complaint but of weakness and difficulty of expectoration exciting cough; dislikes the semicupium, which produces faintness; some subsultus tendinum; bowels open; tongue nearly clean, but dry, and much thirst; no bad taste; pulse 116, soft; heat under the tongue 100, not pungent.

Intermitt. semicup. et enema. Repet. pil. submur. hyd. et opii, et mist. mucilag. Abrad. capillitium et lavet. caput aqua frigida et aceto.

Hora 8va. P. M.—Pulse 124, small, regular, not weak; dozes a great deal, with some stertorous breathing; has much delirium and subsultus tendinum; gives himself over, and spoke of his funeral. Every thing appears white to him; one loose motion; tongue extremely dry, but clean; great thirst; skin very hot, with some tendency to sweat; got an anodyne antimonial draught, with tinct. opii gutt. 40, and a blister was applied to his head.

18th, 14th day.—After his draught he fell very quiet, and did not speak during the night. Died this morning at 7.

Dissection not permitted.

No. XIII.

Case of continued Fever terminating fatally on the 16th day, with severe Nervous Symptoms.

D. O. Shoemaker, aged 20.

June 16, 1818.—Complains of headach, chiefly at the occiput, and pain of back extending along the whole of the spine, both occasionally severe, and little affected by change of posture. The headach is attended with giddiness on sitting up, and some confusion of mind. He has also a pain at the middle of the sternum, increased by full inspiration, with a slight cough, and a copious offensive expectoration. He complains of much nausea, and is frequently affected with rigors and sweatings, but generally feels hot. A few petechiæ of a pale red colour appear about the

breast, wrist, and knees; countenance flushed; pulse 102 in the recumbent, 116 in the semi-erect posture, and rather strong; heat under the tongue 104; tongue clammy, and slightly white; much thirst, but no bad taste; bowels constipated, having had no motion for these two days; urine natural. He sleeps ill from headach, feels weak, and has some tremor.

The complaint commenced five days ago, with rigors, nausea, pain of the neck, back, and limbs, soon followed by headach, cough, and pain of breast, all of which have been progressively getting worse. He can assign no cause for his illness; previous to which he enjoyed good health, and has used no remedy, except a dose of sulphate of magnesia three days ago.

Injic. vespere enema domest. Capiat cras mane infus. senn. ad alvi plenam solutionem.

17th, 7th day of the disease.—Injection produced one copious stool, and the inf. sennæ this morning has produced another offensive; petechiæ nearly gone; countenance less flushed; tongue dry, and yellowish; much thirst; pulse 102, dicrotous; heat under tongue 102, pungent to the touch; pain of breast better, but cough excited by full inspiration; great headach, giddiness, and pain of back, and has some muttering; hearing acute.

Abrad. capillitium, et lavetur caput aqua frigida cum aceto. Mittr. sanguis ad $\frac{3}{4}$ x. et hora somni habt. haust. anod. antimon. Bibat pot. acid. vegetab.

18th, 8th day.—Had nausea after venesection, but the headach and pain of back were relieved by it. Blood not sizy, coagulum soft, with little separation of serum; slept pretty well; pain of breast removed; little cough; green bilious vomiting this morning, with nausea, on taking any thing; pulse 110, good strength; heat 103, great thirst; tongue rather foul, and arid; petechiæ disappearing, but a marbling of the skin still visible. Interm. pot. acid. veget.

Contr. lavatio capitis, et haust. anodyn. antimonial.

Hora 8va, P. M.—Nausea relieved, and complains chiefly of pain of back; pulse 108, not weak; heat 104, but skin not pungent; petechiæ florid, numerous, and distinct, and tongue dry, but not crusted; great thirst, and bad taste, and is restless, and rather dejected.

19th, 9th day.—Slept pretty well, but is very drowsy and dejected; some muttering, and complaining; no motion; no

deafness; countenance slightly flushed; petechiæ darker; tongue very dry, and brown, great thirst, and not foul; pulse 120, soft, but of tolerable strength; heat 102.

Capt. statim haust. anod. antim. et repet. vespere. Intermit. alia. Injic. enema domestic. et applicr. statim vesicator. capiti. Let him have a bottle of porter for drink.

Hora 8va, P. M.—No motion, and little urine; dozes much, but restless with muttering and delirium, though with no complaint but of thirst; pulse 132, small, quick, not weak; heat 104; tongue brown, and arid.

Intermitt. cerevisia fortior, et haust. anod. antim. Applic. statim hirud. 4 temporibus.

20th, 10th day.—Leeches and blister operated well; slept ill, though with less delirium; one motion from injection, and urine more copious; appears better; is distinct, and complains of weakness, giddiness, and thirst; pulse 112, an hour ago very weak, now of good strength; heat 99, but the skin arid; tongue still dry, but moister than before. Petechiæ larger and darker.

Intermitt. medicamenta. To have immediately bottled table-beer for drink.

21st, 11th day.—He took last night half an ounce of Rochelle salts in solution, which he vomited; slept ill. As he had no motion for two days, a domestic enema was given this morning, which produced one motion; pulse 128, pretty strong; heat 100; skin rather pungent; efflorescence declines; eyes rather suffused; countenance better; tongue moister; much thirst; no appetite, deafness, or tremor; less delirium.

Capt. elect. sennæ dr. 1. omni trihorio ad alvi solutionem. Let him have a little tea. Continue the table-beer.

Hora 8va, P. M.—Dislikes the elect. and took but one dose, which produced a small offensive motion; urine more copious; blister discharges well; has an evening exacerbation; pulse 136, full and strong; heat 103.

Applicr. statim hirud. 6 temp.; injic. statim enema domest.

June 22d, 12th day.—Leeches acted well; one copious stool with scybala from the injection; slept ill, and was sponged occasionally with relief; complains of gene-

ral uneasiness and great weakness; some delirium and muttering, but less than formerly; petechiæ still visible; tongue dry, chapt, and of a dark colour; lips and teeth with black sordes; much thirst and bad taste; less tremor and no deafness; pulse 128; heat 103; wishes for sleep and relief from thirst.

R Tart. potass. et sod. unc. $\frac{1}{2}$. Tart. antim. gr. 1. Aq. fontan. unc. 4. Capt. unc. $\frac{1}{2}$ omni hora donec dejecerit alvus. Capt. etiam mist. camphorat. unc. 2 omni bihorio.

Hora 8va, P. M.—Had no motion; sleeps much, with less muttering and delirium; pulse 138, strong and tense; heat 102; feet chilly.

Injic. statim enema purgans et adhib. pediluv.

June 23d, 13th day.—One motion from the enema; slept pretty well; feels rather better. Complains of giddiness, pain of back, and general uneasiness, but no headach or delirium; tongue still dry and chapt, great thirst; countenance more natural; eyes suffused; petechiæ still visible, and some pimples appear about his face; pulse 132, more tranquil; heat 102; dislikes change of temperature from currents of air, and being uncovered.

Capt. statim phosphat. sodæ, unc. 1. et hora somni haust. anod. antimon.

Hora 8va, P. M.—Two small thin motions; urine copious; pulse 140, not weak; heat 103, pungent; complains chiefly of thirst, and is impatient of being touched; much tremor and muttering, with some delirium; no deafness; some difficulty of breathing.

Intermitt. mist. camphor; adhibr. lavatio frigida.

June 24th, 14th day.—Took his anodyne draught, and had a quiet night; no motion, but passes urine well; complains of little but weakness, and sensibility to the touch, and exposure to the air; some delirium and deafness, and tendency to coma, but is distinct when spoken to; petechiæ stationary, but some desquamation on his face; eyes slightly suffused; pulse about 160, easily compressible; heat 105; tongue dry, brown, and chapt; much thirst, but reports himself better; took porridge with some appetite.

Injic. statim enema domest. et capt. vini. rubr. Lusitan. unc. 1, et rept. omni hora pro re nata.

Hora 8va, P. M.—Two fluid light-coloured stools from the injection; likes the wine; has had much delirium, moaning,

muttering, and restlessness, with occasional dozing; complains of soreness of head; pain at times in the breast, with some difficulty of breathing and chilliness; pulse 145, easily reckoned, and not weak; heat 104; other symptoms the same as in the morning.

Omitt. vinum et haust. anod.

June 25th, 15th day.—No motion since the evening; passed a restless night, with much delirium; complains of general uneasiness, debility, and tightness about the præcordia, with pain of back; petechiæ disappearing; some ecchymosis on the left side and hip; countenance flushed; eyes less suffused; features sharp; voice strong, and articulation distinct; tongue dry, brown, and cracked; much thirst; no appetite; pulse 145, compressible, but easily reckoned; heat 103.

Applicr. statim vesicat. pectori, et hirud. 8 temporibus, et postea lavetur caput. aq. frigida cum aceto. Capt. statim Hydr. submuriat, gr. 5. et Pulv. jalap. gr. 10. forma boli; pecnon statim Extract. Hyoscyami gr. 5. ex Aquæ fontan. unc. 1.—Ilinatur ecchym. Tinct. opii camph.

Hora 8va, P. M.

℞ Sulphat magnes. unc. 1½. Aq. menth. pip. Aq. fontan. ana unc. 4. M. capiat unc. 2, omni hora.

June 26th, 16th day.—Salts have produced five fluid light-coloured motions. Besides the leeches of yesterday, twelve more were applied this morning which bled well; the pediluvium and warm fomentations of the abdomen were employed last night; he has had no sleep, and been very restless and delirious; pulse very indistinct, about 145; heat 103; blister has not risen well; tongue very dry, brown, and cracked in the middle, clean at the edges, but not moist; petechiæ as before; takes little food or drink; eyes suffused; countenance sharp and wild; nostrils dilated in breathing, which seems to be rather difficult; complains of being chilly in general; speech less distinct, but moves his arms and legs with tolerable power; no subsultus; abdomen tense, made urine at 9 this morning; ecchymosis on the left hip rather better.

Let his head be kept constantly cool with cloths and very cold water. ℞ Spirit. æther. nit. dr. 2, aq. menth. pip. unc. 2. Capt. ʒ ss. urgente frigore et si superven. rigores, detur statim haust. anod. antimon.

Hora Sva, P.M.—Took the haust. anod. ant. soon after the visit, since which he has lain quiet, in a dozing state, without taking any thing or passing any evacuation. The wet cloths about his head have from the high temperature of the part required frequent renewal. The blister has produced little effect. He lies at present on his back, with his knees drawn up, and appears to have been rubbing his breast; his countenance is sharp and ghastly; his eyes suffused and half open; the pupils contracted and insensible to light; the lips and teeth dry, and obstructed with sordes; pulse scarcely to be counted, but apparently about 75; heat in the axilla 108; respir. 22; he breathes rather laboriously with moaning and dilated nostrils; the feet are cold and damp, the other parts of the body extremely hot and pungent, with a cold sweat beginning to appear on the face; much meteorismus ventriculi, which yields a completely tympanitic sound.

His feet were directed to be kept warm by means of a vessel of hot water.

He continued afterwards in the same state, except that the pupils became dilated, and the heat sunk to 106, and he died at half past nine the same evening.

Dissection not permitted.

No. XIV.

Case of Fever terminating fatally on the 19th day, with severe Nervous Symptoms.

H. W. æt. 16.

January 3d, 1818.—Complains of severe headach, referred to the frontal region, with vertigo, tinnitus aurium and deafness, slight nausea, but no vomiting. Complains also of languor, and prostration of strength, rigors, alternating with heats, pain of the epigastrium, and frequently of the whole abdomen, which is aggravated by pressure, by coughing, and a full inspiration; has pain at the inferior part of the spinal column; slight cough, but no expectoration; bad taste of mouth; gums and teeth are covered with a dark brown crust; face is flushed; eyes somewhat suffused, with intolerance of light; pulse 106, hard but small; belly reported regular; tongue moist, but covered with a

dark brown matter; breath warm and fetid. Catamenia reg. appetite bad, but little thirst.

Complaints began nine days ago with headach, and the above mentioned symptoms; but she feels better in every respect within these two days.

Has used no medicine. *Abradatur capillit. et lavetur caput aq. frigida cum aceto.*

4th, 10th day.—Has a great deal of delirium, and is almost deaf; gets out of bed; much thirst; natural stool; pulse 104, neither full nor hard, but not weak; skin warm, slightly pungent; warm.

Fiat venesect. ad ℥xii. et capt. mist. salin. ℥ij. omni trihorio. Contr. lavatio aq. frigid. Applicet. vesic. pectori.

5th, 11th day.—Delirium without intermission, and can scarcely be kept in bed; was conscious of being bled; blood separated no serum, but is firmly coagulated. Belly open, and passed a lumbricus; blister risen well; pulse 118, rather small; sleeps none; skin not hot; breath scarcely warm; tongue not foul.

Curetur pars exule. ung. epispast. ut fiat ulcus perpetuum. Capt. statim haust. anod. Int. alia.

6th, 12th day.—Fell quiet soon after getting the draught, and only gave occasional cries during the night. Catamenia appeared in excessive quantity; much more collected this morning; complains of the pain of the blister, and answers questions, but is very deaf; headach better; makes little complaint; tongue rather parched, not very foul; belly regular; very dark stools; fetid urine; not insensible to the calls of nature; pulse 106, small, but of good strength; heat of skin moderate, some moisture.

Capt. elect. sennæ ℥i. ad alvum solvend. Rept. haust. anod. hora somni. Bibat pot. acid. veg. ad libitum.

7th, 13th day.—Catamenia still flow, but in moderate quantity; more collected; less deaf; slept well, considerable sopor; pulse 124, moderate strength; skin moderately warm, not harsh; tongue moist; belly natural; urine free; no headach; occasional tinnitus. Complains of pain of back and febrile anxiety; stools dark and still fetid, but less so.

Repr. omnia.

8th, 14th day.—Considerable febrile anxiety; makes no complaint; looks about her, but is still deaf; tongue parched and cracked; a little fur on the teeth and lips; face much

paler; three loose stools, less fetid; urine free; slept quiet; drinks much; considerable sopor; pulse 124, of moderate strength; no eruption.

Continuent. medicam.

9th, 15th day.—Passed her urine once or twice involuntarily; one stool more natural; does not ask for drink, but ceases lamenting when she gets it; some spots about the size of a shilling from pressure, but can lie occasionally on her side; still considerably deaf, but answers when spoken to; though she sleeps a great deal, looks around her; her eye is intelligent; tongue much moister, scarcely dry; still some delirium; pulse 128, vibratory, but of good strength; no subsultus.

Illinantur partes dorsi affect. tinct. opii camph. Int. potus veg. et habeat cerevis pro pot. Habeat etiam haust. anod. stat. et rept. vesp.

10th, 16th day.—Has had a great degree of delirium; slept well after the morning draught, but that of the evening seems to have excited her; had copious stools last night, and this morning, more natural in appearance; spot on the back extending; on both trochanters the skin threatens to break; asks for drink; sometimes sensible to the calls of nature; tongue clean and moist; no fur on the teeth, lips, or gums; pulse 112, small, but sufficiently steady and firm.

Repr. statim haust. anod. Injiciatur enema purgans, et curenter partes cutis inflammat. liniment. alb. ovi.

11th, 17th day.—Delirium much abated, and answers distinctly, but complains much; is still considerably deaf; belly painful on pressure; passed no water since yesterday; enema came away without effect; the skin on the right hip is broken; left hip red, and the sacrum extensively livid; has thirst, and asks for drink; tongue moist, not foul; pulse 110, of moderate strength, rather weak.

Injiciatur statim enema domest. et capt. vini rubri Lusitan. \mathfrak{z} i. secund. quaque hora; hora somni haust. anod. Curetur ulcus liniment. alb. ovi, illin. partes lividae tinct. opii camph. et si opus sit abstrahatur urina ope catheteris.

12th, 18th day.—Became very restless about 3 P. M., and could hardly be kept in bed; but immediately after the visit passed water in bed twice, and the injection brought away little feces. In the evening she was very ill with severe shivering, and her body was generally cold; expressed great pain

on the abdomen being touched; warm water was applied to her feet, and a blister to the abdomen, which has risen during the night. She vomited repeatedly very black, offensive, apparently stercoraceous matter; but since five in the morning has been quieter; takes her wine, which sometimes settles on her stomach; pulse 138, very feeble, sometimes not to be reckoned; tongue not very foul or parched; complains a great deal; delirium almost continual; is very deaf, but sometimes is intelligent; back and left hip not broken; but the right bleeds.

Detur vinum assidue ad ℥ij. vel ℥ss. omni hora.

Int. alia, et ℞ ætheris sulph. cum alco. ℥ij. tinct. opii ℥ss. syr. simp. ℥i. aq. laur. cinnamon. ℥i. aq. font. ℥ij. M. capt. statim ℥ss. et repr. omni bishorio.

13th, 19th day.—Vomiting of a very fetid fluid, of a mixed yellow and dark colour, continued at intervals; and she expired about four in the evening without convulsions; at eight the body was already rigid, livid on the back and arms, and decomposition begun.

Dissection not permitted.

No. XV.

Case of Petechial Fever terminating fatally from Disease of the Mucous Coat of the Intestines.

R. F. æt. 60.

Dec. 16th 1817.—Complains of languor and great debility, with general pain over the whole body, which cannot be referred to one place more than another; nausea, but no vomiting; rigors, alternating with heat; pain at the scrobiculus cordis, with a sense of weight, increased by pressure and a full inspiration; slight cough, but no expectoration. There is an eruption of purple-coloured spots over the whole body, but particularly on the shoulders, breast, and fore-arms, which are not elevated above the surface, nor accompanied with pain or itchiness; pulse 71, rather full; tongue parched and foul; no stool since the 15th; appetite bad; skin rather hot; urgent thirst; sleeps ill. Complaints began 16 days ago, with headach,

rigors, and sweating. On the first attack had pain over the whole body; sense of weight at the scrobiculus. Says the eruption of purple spots first appeared on Sunday last, and was first observed upon her shoulders, breast, and arms, but soon spread over the whole body. Attributes her complaints to cold and wetness, but about three weeks ago dressed the body of a woman who had died from fever, and she was soon after seized with languor and lassitude. Used no medicine except two purgative powders.

17th.—R. infus. sennæ \bar{z} i. singulis horis donec uncias quinque ceperit.

18th.—Much relieved by the purgative, which operated three times; stools very fetid; slept ill; some giddiness and confusion; great thirst; tongue rather parched; pulse 78, pretty full; surface slightly warm; skin broken on the sacrum.

Capt. infus. sennæ \bar{z} ij. omni hora ad catharsin. Mitatur sang. ad \bar{z} iv. et curetur sacrum liniment. aluminis ovi.

19th.—The headach and sickness were relieved by the bleeding; the blood drawn is firmly coagulated and covered with a buffy coat, nearly a third of an inch in thickness, and the serum of that spilt on the tray is gelatinized; many stools, fetid; complains chiefly of weakness and thirst. Petechiæ seem declining; pulse 70, full.

Intr. infus. sennæ. Contr. liniment. alb. ovi, et bibat pot. acid. mineral. ad libitum.

20th.—Slept well; tongue clean; thirst gone; no deafness; petechiæ disappearing.

Contr. med. Let her have a bit of steak daily.

21st.—Did not sleep so well, eruption disappearing. Continue.

22d.—Petechiæ almost gone; makes no complaint; pulse 84, good strength; tongue clean; sore on the back healing.

Intr. potus acidus. Contr. liniment. alb. ovi et diæta. Let her have six ounces of wine daily.

23d.—Complains only of weakness; petechiæ gone; pulse 84; good strength; tongue natural. Continue.

24th.—Was seized last night with diarrhœa; stools remarkably fetid and dark coloured. No other complaint.

Capt. elect. sennæ \bar{z} i. statim, et rept. post tres horas. Hora somni capt. haust. anod. Contr. vinum. Let her have a basin of tea daily.

25th.—Medicine had little effect; stools less fetid; pulse 84; fever and eruption quite gone; still some thirst.

Intr. elect. sennæ. Contr. alia.

26th.—Convalescent. Continue.

27th.—Does not relish her steak; in other respects recovering; cough gone.

Contr. vinum. Intr. alia, et habeat jusculi bovini lb. i. indies.

28th.—Night disturbed by an attack of fetid diarrhœa, followed by sickness and some headach; pulse 100, soft tongue, a little foul.

Capt. tart. sodæ et potass. \mathfrak{z} i. ex aq. lb. ss. Contr. vinum et jusculum bovinum.

29th.—Salts produced several very fetid stools, and she is much relieved to-day; pulse 78.

Intr. tart. sodæ et potass. Capt. pil. hydr. gr. v. omni nocte. Contr. diæta.

30th.—Considerable pain in her bowels, and she passes her stools involuntarily, of very fetid bloody-like matter; strength not returning; pulse 88 of moderate strength; tongue slightly parched.

Intr. med. et diæta et \mathcal{R} . calom. \mathfrak{z} i. opii gr. iv. micæ panis, q. s. ut fiat mass. dividend in pil. octo. Capt. unam omni bihorio. Let her have arrow root to dinner and supper, and tea to breakfast.

31st.—Looseness still severe; appetite decreased; is very weak; pulse 84. Cont. pilul.

Jan. 1st.—No better; slept ill, purging still very severe; stools dark coloured, and very fetid; pulse 80.

Cont. med. et vin.

2d.—Had a bad night; urine and stools passed involuntarily; countenance livid and pale; teeth and gums covered with a dark brown crust; pulse imperceptible at the wrist; arrow root does not agree.

\mathcal{R} . Acid. sulph. dilut. gtt. xii. tinct. opii gtt. v. Fiat haust. secunda quaque hora sumendus. Let her have 10 ounces of wine daily.

3d.—Died yesterday afternoon about 4 o'clock.

Dissection.—Jan. 4.

An effusion of little more than two ounces of a slightly yellowish serum was found in the cavity of the abdomen. The jejunum and ileum, when examined externally, seem-

ed of the natural appearance, only at four or five different points, particularly towards the lower extremity of the ileum, there were observed patches of about an inch in extent of very marked congestion in the capillary veins of the serous membrane. To the touch, however, both parts of the small intestines felt thicker in their parietes than usual. Spots and lines of venous congestion were perceptible also in the mucous membrane of the caput coli, and in greater number, and of greater extent, in the sigmoid flexure of this intestine, and extending downwards the whole length of the rectum.

On slitting open the intestines at various points from the commencement of the jejunum to the rectum, small purple patches were observed on the mucous membrane, occurring at intervals of an inch or two inches at first, and then gradually running more and more into each other, until towards the termination of the ileum in the colon, the whole surface of the mucous membrane exhibited a deep purple hue. This appearance, the dried preparations of the intestines since made, shew clearly to depend on great congestion in the veins of the mucous membrane. The mucous membrane of the caput coli had a similar appearance, but the arch was almost entirely free from disease. At the sigmoid flexure, however, it began again, and continued increasing in depth of colour in this part of the tube, extending downwards until, at the commencement of the rectum, and all the way down this tube, in addition to the venous congestion, numerous fungous-looking patches presented themselves, from a quarter to half an inch broad, elevated fully an eighth of an inch above the surface of the intestine. These had a very vascular appearance, but their surface was covered with a thin yellowish crust, not unlike that which is often seen covering the prominent parts of an open fungus hæmatodes. A quantity of a yellowish bilious matter adhered to the mucous membrane of the jejunum and upper part of the ileum. In the lower part of the ileum and the colon there was nothing but thin light feculent matter.

Jan. 9.

J. GORDON, M. D.

No. XVI.

Case of Fever, with deep Yellowness of the Skin, terminating fatally by Hydrocephalus.

W. B. æt. 60.

May 10, 1818, 8th day of the disease.—Complains of pain of his left side, not increased by a full inspiration; pulse 86, low; no thirst; anorexia; tongue foul and dry; bowels have not been open for two or three days; urine in usual quantity, but high coloured, and tinges linen of a yellow colour; the whole surface of a yellow colour, with small petechiæ of a purple hue thinly scattered over it; his speech has not been distinct since the first attack; much languor; eyes of a yellow colour, and very dull, and great inclination to sleep.

Was attacked eight days ago with shiverings; his pulse has been, according to report, full, and sometimes intermitting; petechiæ and yellowness of skin appeared four days ago, thinly scattered over the breast, inside of the arms and thighs.

Attributes his complaints to sleeping in the same bed with his wife, who had just left the Infirmary, where she had been ill of fever; has been long exposed to great fatigue, and has also been in the habit of taking spirituous liquors.

Has used some purgative medicines.

Injiciatur statim enema purgans.

11th, 9th day.—Has had several motions from the injection; fæces seem to be sufficiently tinged, yet the urine is of a deep colour, and communicates it to linen; the skin too is very yellow; hardly any petechiæ; he complains of nothing, but seems to be very drowsy; the tongue is crusted.

R Pulv. jalap. gr. xij. Submur. hyd. gr. v. M. Detur quamprimum.—Habt. pot. acid. veget.

12th, 10th day.—His physic has had effect; what he passed is of the same colour as before; he makes no complaint; the skin continues quite yellow; the tongue much crusted; the pulse is quick, but the skin very cool.

Rep. pulv. jalap. cum submur. hyd. ut antea.—Let him have $\frac{3}{4}$ iv. of wine in the day.

13th, 11th day.—He had but an indifferent night, and is very drowsy to-day; the colour of his skin is less intensely yellow than it was; has had two passages, quite of the natural colour; urine rather paler coloured; the pulse is natural both in velocity and in strength; the tongue is dry, and seems to be crusted.

Capt. elect. laxant. coch. parv. ij. h. s. Omit. mist. jalap.

14th, 12th day.—He seems to be nearly as he was, only the skin is less yellow; he has had passage, and it seems there is some excoriation on his back.

Cont. elect. lax.

15th, 13th day.—He is much better; the yellowness of his skin is greatly abated; bowels open.

Contr. elect. laxans. Let him have a dish of tea in the morning. His back to be dusted with oxid. zinc.

17th, 15th day.—He makes no complaint; the yellowness of the skin is almost quite gone.

Cont. elect. lax.

21st.—He has no complaint; appetite good. Let him have full diet.

25th.—Complains of nothing but weakness; he has, however, some thirst; pulse 120, and rather strong; tongue rather foul, but moist; took two tea-spoonfuls of the elect. lax. last night, and had one motion from it.

Habt. elect. lax. coch. parv. ij. h. s. Cont. pot. acid.

26th.—The electuary did not operate; pulse 120; rather weak; tongue rather foul; much thirst, and tremor.

Capiat statim tinct. senn. comp. \mathfrak{z} i. tinct. jalap. \mathfrak{z} ij.

Cont. elect. laxans et alia. Injic. enem. purg. et capt. cras mane, sulph. sodæ \mathfrak{z} i. more solito, nisi prius plene responderit alvus.

27th.—The injection and salts operated, each once; the motion from the injection was costive, but that from the salts was loose; pulse 120, weak; tongue foul, and dry, rather dark coloured. No other particular complaint, but last night he complained of pain in his loins and inferior extremities.

Omit. vin. Cont. pot. acid. veg. et elect. lax. ad coch. parv. ij.

28th.—Had no motion from the electuary, but had two stools yesterday after the visit; slept ill; has much thirst; tongue very foul, and dry; pulse 110, intermitting, and rather weak; heat 100; feels no pain but soreness of the legs; no appetite; surface dry.

Cont. pot. acid. veg. et hab. statim sulph. sodæ ʒvi. ex aqua more solito. Capt. tertia quaque hora mist. salin. amm. ʒi.

29th.—Alvine evacuations passed without notice; appears very languid; moaning much; pulse quick and feeble.

℞ Vin. rubr. ʒviij. aquæ ʒiv. Capt. ʒi. subinde.

30th.—Yellowness increased; pulse 90, and intermitting; three green and offensive motions.

Rep. vin. ℞ Submur. hyd. gr. i. Opii gr. ss. fiat. Pil. ter. indies sumend.

31st.—Has been since last night in a state of stupor; yellowness of skin and of urine increased; pulse 96, irregular; deglutition difficult; bowels natural.

Rep. vin. et pil. ex. submur. hyd. sine opio.

June 1st.—Same comatose state has continued; fæces and urine passed involuntarily; pulse 94, and regular; yellowness the same; revived after the wine.

Rep. vin. ad lb. i. et submur. hyd.

2d.—Continued in the same comatose state till nine this morning, since which time has revived very much, and is now perfectly sensible; pulse 94, stronger; tongue cleaner; deglutition better; urine and fæces mostly passed involuntarily; excoriation of glutei of both sides; yellowness diminished.

Rep. vin. et subm. hyd. Applic. part. excor. lin. ex album. ovi.

3d.—Has in general been much in the same state as yesterday; pulse 96, and full; no stool; urine passed involuntarily, of yellow colour, and depositing a very copious sediment with mur. hyd.; skin less yellow.

Rep. vin. submur. hyd. et habt. jusc. bov. lb. ij. indies.

4th.—Is lying quiet, but perfectly sensible. An injection last night operated; pulse 100, fuller; excoriations no better. Continue.

5th.—Symptoms the same; skin and urine less yellow; excoriations no better; pulse 90; no dejections. Cont.

6th.—More sensible; no motions, but had one dejection from an enema; excoriations no better; pulse 96; mouth affected.

Rep. vin. et jus. bov. Omit. pil. ex submur. hyd.

7th.—No delirium or coma; pulse 86, and of natural strength; has had elect. lax. without effect; excoriations the same; appetite better.

Rep. vinum, et jus. bovin. To have an egg daily.

8th.—An enema given last night, which brought off a large quantity of black fetid matter; some delirium in the night; excoriation better; pulse 84; urine very high-coloured; yellowness. Continue.

9th.—Good night; less delirium; appetite improving; pulse 100; urine very high coloured; excoriation sloughing; bowels natural, open.

Rep. vin.—jus. bov. et vespere capt. pil. aloet. ij.

10th.—Last night much affected with tremors and coma; slept ill; to-day feels much better; pulse 70; urine very high-coloured; no effect from the pills; countenance more natural.

Rep. vin.—jus. bov.—pil aloet. ij. pluresve si opus sit.

11th.—Three pills taken, which operated; no delirium; countenance much more natural; pulse 90, fuller; urine still high-coloured; ulcerations the same. Cont.

12th.—Slept worse; slight delirium; sores improving; urine very red. Cont.

13th.—Slept well; no delirium; pulse 90, not weak; excoriation improving; urine less high-coloured. Cont.

14th.—Slept well; more delirium; one dejection from an enema given last night; urine less high-coloured; pulse 84, and intermitting at times; countenance more natural. Cont.

15th.—Not so well; sores more painful; some delirium at times, and subsultus tendinum; pulse 90, slightly intermittent; urine more red; three dejections, very black.

Rep. vin. et jus. bov. Capt. mist. cinchon. arom. \bar{z} i. bis indies, et vespere pil. al. iij.

16th.—Slept much; more delirium; countenance worse; urine more high-coloured; pulse 100; no dejection; sores the same. Cont.

17th.—Slept well; some delirium; bowels costive; excoriations cleaning; tongue black and dry; smell cadaverous; much thirst; urine evidently sanguineous; pulse 80, weak, and intermitting; extremities not warm; wishes for tea in the afternoon.

Habt. infus. theæ ad libitum. Injic. enema emolliens.

18th.—Has had no motion for several days, and the enema came away without effect; state variable, sometimes very low and weak, at other times better; pulse fluctuating, both in frequency and strength; takes little food; some de-

lirium; very dry black crust on the tongue; urine as before; excoriations separating well from a healthy surface.

Repet. enema emolliens statim, et omni trihorio si opus sit. Contr. diæta ut heri, et habt. elect. subborat. sodæ unc. $\frac{1}{2}$ ad ling. detergend.

19th.—Has had three injections, which returned immediately, and taken electuary without effect; tongue very dark, but moister; some delirium; much tremor and subsultus tendinum; pulse scarcely perceptible.

Contr. medicamenta et habt. vin. domest. unc. 4. capt. unc. $\frac{1}{2}$ pro re nata.

Hora 8va, P. M. had a copious black offensive motion; dozes much, with gesticulation.

20th.—Has had two thin offensive motions; takes nothing but wine; felt warm in the night, with much starting, but lies quiet; pulse scarcely perceptible.

Repet. vinum. Intermitt. cætera.

21st.—Takes little but wine; six thin offensive motions; excoriations worse, and increasing; breathing laborious; urine scanty; catheter was employed, but drew off very little urine.

Habt. vin. rub. Lusitan. unc. 4 vice vin. domest.

Gradually declined, and died at five P. M.

Dissection.

Upon making the usual transverse section of the cerebral hemisphere, the left lateral ventricle, which was first laid open, was found distended in every direction; the roof of it was more elevated than usual, and its outer wall was extruded considerably; it contained from one to two ounces of transparent, colourless, watery fluid. When this was removed, the fornix and its connections were in the following state: the foramen Monroianum was very distinct, raised into a circular aperture, of the calibre of a large goose-quill, through which, as a free communication, the fluid came from the right lateral ventricle. Behind and above the foramen Monroianum there was a large elliptical aperture; the longest diameter, about five or six lines, being antero-posterior, equally communicating with the right ventricle. The inferior part or supporting basis of this aperture, was formed at least by part of the fornix, the superior part of it by the corpus callosum. The cornua of the ventricles contained fluid of the same characters. The base of the brain and cerebellum presented nothing unusual, and its

substance, though fully examined by different sections, seemed to differ in no respect from the sound appearance.

On opening the abdomen, the alimentary canal appeared sound, and there were no traces of inflammation or disease. The liver was natural in every respect, and the gall-bladder was filled with healthy bile, and contained no calculi, nor was there any obstruction in any of the ducts. The urinary bladder was very much contracted, and there were many distinct bloody points, not connected by vessels, beneath the epidermis of the mucous coat.

In a case also of fever which I lately examined at Queensberry House for my friend Dr Welsh, there was fluid both beneath the arachnoid coat and in the ventricles; the corpus callosum was elevated from the fornix, and the interposed plate of cerebral matter, the septum lucidum, had its fibres so stretched that they had a reticulated appearance. This, I think, may be safely admitted to be the more early state of the appearance which we saw in the case of B. to which, indeed, if the life of the latter patient had continued so long as to allow the morbid cause to continue its action, it would have ultimately gone; for in this reticulated state, a very slight mechanical force, the mere application of the finger of one of the gentlemen produced the breach of the reticula, and the retraction of the fibres so as to form the elliptical aperture, the more advanced state of the diseased septum which we witnessed in Burns. But as the first cause seems quite adequate to the effect, as it is more easy to see how it can produce the different appearances observed upon examination, as the two others seem more adventitious, and are less supported by the evidence which we are in the habit of suspecting in pathological reasonings, I believe we are borne out in saying, that the appearance alluded to is produced by mere mechanical distention.

DAVID CRAIGIE.

No. XVII.

Case of Acute Hepatitis; or Fever with affection of the Liver.

R. H. W. aged 41, Flax-dresser.

July 11, 1818.—Complains of a constant lancinating pain and sense of heat across the breast, and in the left

side, increased by coughing and full inspiration, and worst in the forenoon. He has a severe cough, chiefly in the morning, with scanty expectoration of a dark and saltish matter, and some dyspnœa, aggravated by the recumbent posture, but not preventing his lying on either side, though he lies best on the right. He complains also of a constant dull pain, and sense of heat in the forehead and ears, with giddiness, confusion of mind, dimness of sight, and occasional murmuring sounds, and a degree of deafness, increased by motion, coughing, and full inspiration, and relieved by the recumbent posture. He is likewise affected with general soreness and uneasiness, as if from contusion, pains in the left knee and right shoulder, which render him very restless, and are worst at night, and some tenderness and inflation of the abdomen.

Pulse 124, strong and full, but somewhat contracted, and nearly alike both in the erect and recumbent posture; respiration 27, short, and attended with moaning; heat 105, pungent. He feels generally hot, but is subject to severe rigors on drinking any thing cold, followed by intense heat, especially of the head and feet, and ultimately by profuse sweating, confined to the superior parts, apparently with some relief. He has no petechiæ; countenance flushed, and tinged yellow since his illness; eyes a little suffused; light and sound offensive; tongue whitish, but neither dry nor foul; a disagreeable coppery taste in the mouth, with intense thirst, and no appetite. He has frequent sour eructations, but no nausea, and vomited this morning a small quantity of a salt and acid liquor, of an orange colour. He has a similar discharge by stool, with some tormina, tenesmus, and a sense of soreness and heat at the anus. His urine is also of an orange colour, and passed in small quantities at a time, but without pain or difficulty. He is somewhat dejected and apprehensive; sleeps ill, with starting, and tendency to delirium; has a little tremor, and on attempting to stand upright is affected with increased headach and pain of breast, and great giddiness, faintness, and dimness of sight.

The complaint commenced three days ago, this being the fourth inclusive, with general debility, coldness of the extremities, and rigors, followed by heat, and soon after by

the other symptoms above described, all of which have progressively increased. Bilious diarrhœa, and a discharge of orange-coloured urine supervened yesterday evening, but the former has since abated.

The patient was dismissed from the navy, after thirteen years service, about three years ago, and has since been engaged in a manufactory at Kirkhill, as a flax-dresser, an employment which has subjected him to a constant cough, with copious thick expectoration; but since his present illness the cough has increased, and the expectoration diminished.

He can assign no cause for the complaint, and is not aware of having been exposed to contagion, unless in visiting some convalescents from fever at Kirkhill, the day before his attack. He has lately been travelling about, and was taken ill on his way to Liberton, from whence he was conveyed to the Infirmary this morning.

No remedies have been employed.

Statim fiat venesectio ad unc. 16. Abrad. capillities, et lavr. caput aqua frigida. Capt. mist. salin. ammon. unc. 2 omni trihorio, et injic. vespere enema emolliens. Bibat decoct. avenæ tepidum.

12th, 5th day.—Dyspnœa and cough relieved by bleeding; little pain except on full inspiration; blood has separated little serum, but one cup is very buffy; slept ill, with much dreaming; mind at present distinct; a great many small bilious motions, with scybala and heat of anus; urine of a wine yellow, cannot be retained long, but is passed without pain or difficulty; acute pain on pressing two circumscribed spots, one a little below the epigastrium, and the other at the margin of the ribs on the left side, with some tension; pulse 104, small, but not weak; heat 104, pungent, but he feels rather chilly, except in the head, which is affected with dull pain and giddiness; heat of head relieved by wet cloths; general rigors, easily brought on by cold drink, and exposure to air; countenance of a dusky yellow; eyes rather suffused; pupils alternately contract and dilate on exposure to light; tongue moist, and coated of a dull white; breath offensive; nauseous coppery taste; much thirst; no appetite; a little tremor and no deafness, but general uneasiness and weakness, particularly in the legs.

Statim fiat venesectio ad unc. 16. Capt. pil. comp.

Eblan. 2 omni bihorio donec respond. alvus.
 Applic. hirud. 12. partibus dolentibus. R Unguent.
 hyd. unc. 1. pulv. opii. scr. 1. M. Inungr. dr. 1.
 bis indies hypochondriis. Continr. lavat. frigid. ca-
 pitis, et mist. salin. ammon.

Hora 8va.—About sixteen ounces of blood drawn at
 3 P. M. which produced faintness and a little vomiting;
 blood buffy in two of the three cups; pain of breast and left
 side removed; a little remains in the epigastrium just below
 the cartilag. ensiform. only on pressure or very full inspira-
 tion; complains of great weakness and giddiness, but
 scarcely any headach; has also some pain in the left thigh
 and knee, and at the top of the right shoulder; pulse 116,
 of good strength; heat 105; skin ardent, yet he feels
 chilly, especially about the shoulders, and is impatient of
 exposure to the air; tongue coated white, with intense
 thirst; has taken six pills, which have produced a great
 number of thin bilious motions, containing a large quanti-
 ty of scybala, the last only a greenish fluid.

Intermitt. pilulæ.

13th, 6th day.—Slept pretty well, but dreamt much;
 a general and very profuse sweat broke out yesterday even-
 ing, and continued through the night; several motions of
 green fluid without scybala; urine less yellow, and passed
 with some pain; all his pains easier; much giddiness, but
 little headach; vertigo on attempting to rise; occasional
 dry cough; pulse 90, natural; heat 98; skin cool, and not
 impatient of exposure; countenance less yellow; eyes a little
 turbid; tongue not so white; disagreeable but not coppery
 taste; less thirst; little appetite; leeches and ungt. hyd. not
 applied.

Applic. ungt. hyd. ut heri præscript. Intermitt. alia.

Hora 8va.—Pain of epigastrium continues on full inspi-
 ration, with dry cough; bowels rather confined.

Applic. hirud. 12. epigastrio, postea inungr. ungt. hyd.
 hypoch. Capt. pil. comp. Eblan. 2. omni bihorio
 ad catharsin.

14th, 7th day.—Nine leeches acted well; a great many
 scanty thin stools, containing mucus and blood, with tor-
 mina, tenesmus, soreness, and heat of anus; slept ill, with
 much wandering, but now feels much better; no pain of
 epigastrium on pressure or the fullest inspiration; pulse
 82, nearly natural; heat 100, and feels himself comfortably

warm; tongue moist, and less white; much thirst; some appetite; urine of a light orange.

Contin. ungt. hyd. Bibat. decoct. hord. ad lib. Habt. juscul. bovin. lib. 1. indies.

Hora 8va.—Dysentery continues, and he complains of great giddiness and tendency to wandering; otherwise well and free from pain. Capt. haust. ex. ol. ricini.

15th, 8th day.—Ol. ricini produced ten or eleven scanty bilious motions, with little blood, and no pain, followed by relief; slept well, but with wandering; is free from complaint except giddiness and trembling from debility on rising; yellowness almost gone; eyes sore and turbid; tongue much improved; good appetite; mouth a little affected; pulse 82, natural.

Utatur collyrio ex. vin. opii dr. $\frac{1}{2}$ et aq. fontan. unc. 1.

Continr. medicamenta ut heri.

Hora 8va.—Capt. hor. som. haust. ex. ol. ricini.

16th, 9th day.—Slept very well, with little wandering; five thin light-yellow motions, with some straining; no complaint but weakness, especially of the right leg, with slight cramps; pulse 80, natural; tongue clean, and moist; some bad taste, and thirst; more appetite.

Intermitt. ungt. hydrarg. Habt. juscul. bovin. lb. $1\frac{1}{2}$ indies, decoct. hord. ad libitum; collyrium anod. ut antea.

Hora 8va.—Had no motion; some pain of legs resembling cramp. Capt. elect. laxant. dr. 2.

17th.—Six loose greenish stools; slept well, without wandering; had a dull pain of forehead, with giddiness, this morning, but is now better; countenance still yellow; tongue quite clean; much thirst; good appetite; mouth a little affected; pulse 84. Let him have a little meat.

Hora 8va.—Bowels rather confined and uneasy.

Capt. cras mane bol. ex rhei gr. 30.

18th.—Had eleven lumpy and membranous stools through the night, without tormina, but much tenesmus and prolapsus ani; took the bolus very early this morning, which procured ease and sleep, and one natural motion; makes little complaint but of weakness.

Contin. diæta. Intermitt. medicam.

19th.—Last night took a bolus, with 30 grains of rhubarb; slept well without wandering; one motion from the

bolus, whitish, and not copious; still complains of weakness and giddiness; more affection of mouth; some pain of right shoulder this morning, now gone; face still yellowish; tongue clean; some thirst; good appetite; pulse 82, natural.

℞ Sulphat. magnes. unc. 1. Infus. sennæ unc. 8.

Solve. Capt. unc. 2. omni hora ad catharsin.

20th.—Took six ounces of the medicine, which produced six copious motions, not thin, but dark green, and tinged with blood; much straining, but no prolapsus; slept pretty well; complains of increased weakness, and soreness of bowels and legs; other symptoms as before; pulse 72, weak.

Contin. diæta et capt. vin. rub. Lus. unc. 6 indies.

21st.—Slept extremely well; no motion since yesterday; complains only of cramp-like pain of right leg; some glandular enlargement on the left jaw, with salivation and a little papular eruption under the right ear; pulse 78, natural; face still yellow.

Capt. elect. laxant. dr. 1. omni bihorio, donec deject. alvus. Contin. vin. et diæta.

22d.—Slept well; six motions from the elect., dark-greenish and thin, without scybala or blood; weakness, especially of the right leg, and some giddiness, with occasional pain of right shoulder, and papular eruption from the ear to the right shoulder; less yellowness; pulse 68, weak; tongue clean; mouth less affected; some thirst; good appetite; considerable tremor.

Contin. diæta cum vino. Interm. medicamenta.

23d.—Slept well; one natural motion; complains only of giddiness of head, and numbness of legs; general health good; pulse 70, weak.

Rep. diæt. et vin. adhib. pediluv.

24th.—Slept well; some blood passed by stool; less numbness of legs and giddiness. Continue.

25th.—Slept well; transient pains in the top of the right shoulder; giddiness relieved; some aphthæ of the mouth; one thin dark-green motion; pulse 60; good appetite.

Intermitt. medicam. ℞ Acid. nitric. dr. 1. syrupi. unc. simp. aq. font. lb. 2. M. Bibat. indies.

Let him have an increased allowance of food.

26th.—Motions still dark greenish, but complains only

of weakness and numbness of right leg and foot ; pulse 72, natural ; yellowness of face disappearing.

31st.—Convalescent.

Let him be remitted to the ordinary physician.

No. XVIII.

Case of Acute Peritonitis ; or Fever with affection of the Peritonæum.

G. R. æt. 20. Married.

July 11.—Complains of pain over the whole abdomen, particularly on the left side, which is much increased on full inspiration, and on pressure ; also of much pain in the small of the back, and of slight headach. She lies easiest on the back and right side, but severe pain is brought on when she lies on the left side. Countenance somewhat dejected ; tongue parched ; much thirst ; some nausea, and occasional vomiting ; no dejection for two days ; pulse 90, of natural strength ; heat natural ; surface not dry ; occasional perspiration ; resp. 28, somewhat difficult ; gravida fuit per menses quatuor.

Has not been quite well for two or three weeks ; two days ago had some flooding, but no abortion ; since which time she has had much pain of the abdomen, but no discharge per vaginam.

Statim. ft. venesect. ad $\bar{3}$ xij. vel plus si opus sit, et

Capt. elect. lax. $\bar{3}$ i. omni horâ, ad plenam alv. solut.

12th.—Sixteen ounces of blood drawn with great relief ; blood not buffy, but serum abundant ; several motions from three drachms of electuary ; slight pain of left hypochondrium, a little increased on pressure, and much by lying on left side, and from full inspiration ; pulse 102, small ; resp. 27, still difficult ; tongue much parched ; less thirst ; slept well.

Applic. hirud. 12. part. dolent. Bibat. decoct. hord.
ad libit

13.—Twelve leeches acted well with relief to pain of left side, but at night had much pain of chest and back, which went off this morning, and the pain of left side has returned, and is much increased by inspiration and pressure; cannot lie on left side; tongue rather white; little thirst; two motions; pulse 105; little cough.

Mitr. sanguis ad unc. 12. Applic. vesicator. lat. sinistro.

14th.—Much better after bleeding; blood buffy, and cupped; blister rose well; pain of left hypochondrium gone; breathes still rather difficultly, with some pain of scrob. cord.; slight nausea; tongue parched; much thirst; pulse 96, small; skin warm and moist; bowels open.

Capt. pil. hyd. bis indies. Contin. decoct. hord.

15th.—Feels better; back and legs sore; left side well; epigastrium pained by inspiration and pressure; pulse 112, not strong; heat increased; face flushed; bowels costive.

Rep. pil. hyd. et decoct. hordei. Capt. statim. infus. sennæ unc. 2. et rep. omni horâ ad catharsin.

16th.—Senna operated four times; gums rather sore; much better; no pain on the fullest inspiration, but still some pain of small of back and head; pulse 96; heat 100; feels hot; some perspiration; tongue more moist; thirst less.

Abscind. capillitium. Intermitt. medicamenta.

17th.—A good night, but had a transient attack of pain in her stomach and back yesterday evening; slight headache; otherwise convalescent.

18th.—Had a good night; much better; only a little pain at the lower part of the left hypochondrium.

Applic. catapl. part. dolent. Capt. mist. salin. unc. 2. omni trihorio.

19th.—Pain of left side and back continue; pulse 100; tongue dry; some thirst; bowels regular; countenance not flushed.

Applic. vesicator. lateri. Repet. mist. salin.

20th.—Could not take her saline mixture; blister rose well, and pain of side removed, but she has since been affected with much dysuria, and some ardor urinæ; small of back continues painful; bowels open.

Injicr. statim aq. tepid. lib. 1. Bibat. emuls. acaciæ ad libitum.

21st.—Dysuria somewhat relieved by the tepid injection, but more so by the emulsion which she drank, to the extent of lb. 4.; urine now copious and easy; slept well; flushing of face quite gone, but still complains of much pain in the small of her back; skin warm and moist; pulse natural; tongue clean; blister rose well, and relieved the pain of the part to which it was applied.

Intermit. med. Capt. h. s. haust. anod. ant.

Hora 8va.—Before taking her draught, whilst sleeping, she was seized with sobbing and dyspnœa, and could scarcely speak, though sensible. She pressed with both hands on the scrob. cord. as if it gave relief, and complained of great pain at the lower part of the sternum; resp. 44; after taking her draught discharged much flatus with great relief.

22.—Slept well, but complains of nausea and some pain at the lower part of the sternum; tongue dry; bad taste; much thirst; pulse 101; no motion.

Rept. haust. anod. antimon. Capt. statim bol. jalap. comp.

23.—Vomited her bolus, and has had no motion; pulse 90; tongue whitish, much thirst; bad taste; some pain of back, but no nîsus abortivus.

Capt. infus. sennæ unc. 2 omni bihor. ad alvum leniter solvendam. Repet. haust. anod. simplex.

24th.—Had a bad night, but is now better; complains of pain of back and abdomen on pressure; four motions of natural appearance; face flushed; pulse 96, of moderate strength; tongue white and clammy, with bitter taste.

Interm. medicamenta. Habt. vin. domestic. unc. 6 indies.

25th.—Pain of head and abdomen trifling, but that of back continues. Thinks the wine affects her.

Interm. vinum. contin. diæta.

26th.—Is only weak; bowels rather slow.

Capt. infus. sennæ ad alvum laxandam.

27th.—Bowels open; four dark motions; functions natural.

Interm. medicamenta.

28.—No complaint but of pain of back ; functions natural.

Applicr. emplastr. picis dorso.

29th.—No complaint but weakness.

Let her have a little meat daily.

30th.—No complaint ; bowels regular ; getting stronger.

Contin. diæta.

31st.—Still very weak.

Let her be remitted to the ordinary physician.

No. XIX.

Case of Ophthalmia Membranarum, or Iritis, in a Girl, cured by the Application of Vinum Opii.

C. F. aged 15, Servant.

June 2, 1818.—Hora 8va.—Is affected with considerable redness of the tunica conjunctiva in both eyes, which water much, particularly on exposure to a strong light, but otherwise there is no intolerance of light, pain, or injury of vision.

Pulse 96, small, and weak in the erect posture ; 72 in the recumbent ; skin cool ; tongue clean, but rather clammy ; no thirst ; appetite pretty good ; bowels regular ; catamenia deficient.

The complaint commenced ten days ago, with itchiness of the eyes, and a sensation as if grains of sand were lodged in them, which has since gone off. During the last four days the watering has increased. The patient has once taken purgative medicine, and used tepid milk and water locally, with little advantage.

She attributes the complaint to chill, from lying uncovered at night.

She was treated with blisters, purgatives, and collyrium of acetate of zinc. The inflammation of her eyes was diminishing, but again increased on the 15th.

15th.—Inflammation of eyes rather increased ; bowels open.

Repet. sol. acet. zinc. et vespere applicr. oculis guttæ nonnullæ solut. opii. vinosæ.

16th.—Inflammation of eyes much diminished since the application of the vin. opii; pulse 72, weak. No other complaint.

Repet. applicatio vin. opii vespere, et collyrium.

17th.—The conjunctiva lining the eyelids is considerably inflamed and slightly granular; felt relief from the vin. opii.

Rep. vin. op. Intermit. sol acet. zinc.

18th.—Inflammation of eyes diminishes, and she has less intolerance of light. No other complaint.

Cont. vin. op. pro collyr.

30th.—Continues to mend, but red vessels still pass along the conjunctiva to the edge of the cornea, and there is some turbidness of the pupils, which contract readily, and seem to have formed no adhesions.

Cont. vin. opii, et cras mane appl. cuique oculo guttæ ij. sol. ext. hyoscyam.

July 1st.—Pupils dilate uniformly with hyoscyamus, and inflammation continues to decrease.

Cont. vin. op.

On the 6th she was dismissed cured.

No. XX.

Case of Iritis in a Young Woman, cured by Mercurial Salivation.

R. W. æt. 20. Servant.

July 6, 1818.—Is affected with pain, a sensation of burning, and occasionally of grittiness in both eyes, but particularly in the right; occasionally, also, there is a sensation of pressure, as if the globe were too large for the socket. There is a very diffused vascularity seen through the conjunctiva, and the cornea is perfectly transparent. A few specks apparently of extravasated blood are to be seen on the iris of the right eye, and the fine vessels on it seem to be injected with red blood.

A layer of lymph appears on several parts of the iris of both eyes, but particularly round the pupil, where it is in greatest quantity. The iris, particularly in the right eye, is

more cloudy than in the healthy state. The pupil of the left eye is irregularly oblong; that of the right is nearly circular, but dilates with irregular edges.

She has a severe pain of the forehead, particularly over the right eye, which is aggravated in paroxysms, and more intolerable in the night; she also complains of sore throat, particularly on the left side, and of difficult deglutition. The tonsils are much swollen and uneven, without ulceration; and the uvula, from the swelling on each side, seems shorter than usual. One or two glands on the left side of the neck are a little enlarged; her tongue is rather white, and she has a bad taste, particularly in the morning; appetite good; bowels regular; catamenia defuere per hebdom. x. other functions natural.

Her sore throat commenced about three months ago, preceded by an eating sore of the upper lip; the sore was cured by the application of sulphate of copper, and acid gargles have been used to the throat, with little relief. About six weeks ago she began to use the blue pill, one night and morning, and continued them for two weeks, without any affection of mouth. In a few days after commencing the use of mercury, the left eye was first affected, and recovered in about a fortnight. It began again to be affected about five days ago, and has gradually grown worse since. The right eye was first observed to be inflamed about a fortnight ago, and has since grown worse.

Has used saturnine collyria, which gave pain, and excited a sensation of heat. Had three leeches applied to the right eye without relief, and she thinks the headach was increased by them.

Ap. hirud. xij. circa oculum dext. et temp. dext.

7th.—Leeches bled copiously, with much relief to the pain of forehead. Her eyes bear the light better than their appearance would indicate. The inflammation seems a little diminished.

Fiat arteriotomia ad unc. 16. Capiat bolum jalapæ.

Instill. oculis, bis indies, solut. hyoscyam gutt. 2.

8th.—The medicines ordered yesterday were countermanded, and she was desired to take pills of 3 grs. of calomel, and 1 gr. of opium, one every second hour.

She took four before nine last night, and resumed their use at six this morning, having taken eight in all.

The mercurial action seems to have commenced in her mouth; some nausea this morning, and vomited once; inflammation of eyes nearly the same; less pain of head and eyes, and bears the light better; throat the same; tongue white; no thirst; bowels regular; pulse natural.

Continr. pil. calomel. et opii.

9th.—Mercurial action has commenced; much nausea; some vomiting; no motion for two days; much inclination to sleep; thinks her throat better, but it appears the same; left eye more painful this morning, but easier at present; rather more inflamed, and pupil more dim; right eye less inflamed, and evidently better; no headach, and less intolerance of light.

Intermitt. medicamenta. Instillr. oculis solut. hyosciam. gutt. 2. vel 3. bis indies. Capt. elect. laxant. dr. 1. omni hora donec. dejecerit alvus.

10th.—Prescription of yesterday not carried into effect, and the mercurial formerly ordered was repeated during the day and night till ten this morning. Got an injection last night which operated thrice; mouth now much affected; teeth loose; copious salivation; no headach; eyes less painful; right eye much less inflamed, and the iris clearer; but the left nearly as yesterday; vision of right eye much better; that of the left rather better; feels no pain of throat; tonsils clean, and rather less swollen; tongue very white, and loaded; no thirst; pulse 116, full; temp. of skin high.

Intermitt. medicamenta. Capt. bol. jalap. comp.

Instill. oculis ter indies gutt. aliquot solut. extract. hyoscyami.

11th.—Hyoscyamus applied twice, which produced some dilatation of both pupils; both irregular, but the left less than before; inflammation very much diminished; no pain, and sees clearer; salivation, &c. great; pulse 120; throat nearly the same; tongue very foul; bolus operated five times.

Rept. solut. hyoscyami. Interm. alia.

12th.—Pupils considerably dilated by the hyoscyamus; both considerably irregular; the inner margin of the right more distinct than that of the left, and colour of its iris almost natural; still some muddiness in the left eye; inflammation of conjunctiva greatly reduced, and no vessels pass over the lucid cornea; mouth very sore; saliva.

tion less ; throat not painful ; swelling and inflammation the same ; tongue much loaded ; one motion ; pulse 120.

Capt. bol. jalap. comp. Repetr. solut. hyoscyami.

13th.—Complains only of soreness of mouth ; salivation continues ; throat the same ; bowels regular ; pulse 96 ; eyes much less inflamed ; pupils dilate by the use of hyoscyamus ; that of the left eye less irregular ; that of the right as yesterday ; sees quite well, and has no pain.

Contin. solut. hyoscyami.

14th.—Thinks the right eye dimmer, and it appears a little more inflamed ; left eye still better ; salivation continues ; mouth very sore ; throat the same.

Repet. instill. hyoscyami.

15th.—Both eyes much more free of inflammation ; vision improved ; pupils still rather irregular, and dilate from hyoscyamus, particularly the left ; mouth continues sore with salivation ; throat as before ; no thirst ; pulse 102 ; bowels regular.

Continue.

16th.—Salivation much less ; mouth still very sore ; throat no worse ; eyes improving very much ; left pupil more regular ; some inflammation remaining in the left eye ; bowels regular ; pulse 90.

Continue.

17th.—Salivation less ; mouth still sore ; got the borax gargle last night ; eyes very much better ; throat better ; tonsils less inflamed, and swollen ; pulse 100, strong.

Contin. garg. boracis. Repet. hyoscyamus.

18th.—Eyes continue better ; both pupils still irregular ; left much more dilated than the right, upon which only there is any remains of inflammation ; throat less painful.

Contin. garg. boracis, et instillat. solut. hyoscyami.

19th.—Eyes continue to improve, and the swelling of the throat is much better, without any loss of substance ; tongue still very foul, and loaded.

Capt. cras mane infus. sennæ unc. 2. et repet. si opus sit.

20th.—Continues to recover, though the pupils are both irregular, and the colour and clearness of the right is not yet fully restored. Health good.

Continue.

22d.—Eyes still much better ; left pupil almost regular.

Applic. vesicator. faucibus externis.

23d.—Blister has risen well.

24th.—Eyes almost well, but the right pupil is still small, and both slightly irregular; throat much better; inflammation slight, and swelling much decreased; mouth almost well.

Continue.

28th.—General health good; eyes continue to improve; throat better.

Continue.

29th.—Conjunctiva slightly suffused; left pupil rather irregular; vision natural; throat better.

Continue.

30th.—Eyes very slightly suffused with vestige of a ring round the iris; pupil nearly regular; vision natural; throat well; blister healing; health good; bowels regular.

Let her be dismissed, taking with her half an ounce of vin. opii.

No. XXI.

Case of Phthisis Pulmonalis, and Ascites, with Appearances on Dissection.

ALEXANDER WELLS, Weaver. æt. 19.

Nov. 25th 1817.—Complains of great debility; pain of breast under the sternum, aggravated by pressure; full inspiration, and some cough, with expectoration of a thick viscid matter. He also complains of pain of the whole abdomen, and particularly of the left hypochondrium, which is likewise increased by pressure and full inspiration. The whole abdomen is much swollen and tense, affording an evident sense of fluctuation. In the evening the swelling extends to the scrotum, and the œdema of the inferior extremities increases considerably. He has also frequent fluid, high coloured and fetid dejections, particularly in the night, accompanied with tenesmus, and at times mixed with blood.

Pulse 124; appetite good; urgent thirst, with occasional bad taste of mouth; urine in natural quantity, but at times passed with considerable pain and difficulty; respiration laborious, and increased by the horizontal posture, either on the back or right side, performed with a wheezing noise;

countenance rather anxious; tongue clean and moist at its apex, slightly furred at its base; surface of a moderate warmth; sleeps well.

Was first seized about twelve months ago with dyspnœa and cough, which, however, did not prevent him following his usual occupations. About seven weeks ago the œdema of his legs was first observed, and has progressively extended itself to the abdomen. Can assign no cause for his complaints.

Has used very frequently purgative medicines, which, during their operation, in general produced a partial abatement of the symptoms. From the effects reported to have been produced on the mouth, the purgatives seem to have been mercurial.

26th.—Swellings as before; has had three stools since admission; urine very scanty; pulse 106.

℞ Gambog. gr. v. Pulv. super. tart. ʒ ss. syr. simpl. q. s. ut fiat electuar. molle. Sumat cochlear. parvulum omni hora donec superven. catharsis incipiens cras mane. Let him have a bottle of gin punch daily.

27th.—Has had several small stools since he began the electuary this morning; urine still scanty; that of last night has deposited a considerable quantity of lateritious sediment; that of this morning limpid and amber-coloured; swellings and other symptoms as before; pulse 108; heat moderate.

Repr. elect. cras mane, et illin. crura omni vespere, per horæ quadrantis spatium ol. camphorat.

28th.—Had several watery stools from his electuary both yesterday and this morning, although he has to-day taken only one dose; urine still very scanty, and that of this morning is viscid and whitish coloured; swellings nearly as before.

Cont. medicament. et ℞ Extract. corticis cinchon. ʒij.

Sulphat. ferri pur. ʒi. Syr. simp. q. s. ft. mass. divid. in pilul. granorum v. sumat duas omni man. et vesp.

29th.—The pills sit easily on his stomach; had four watery stools though he took no electuary; urine still scanty; swelling nearly as before; pulse 100; heat moderate.

Cont. pil. u. a. Int. Electuar. et ℞ mist. mucilaginis, ʒvi.

Tinct. Digitalis, ʒi. Sumat ʒss ter in die.

30th.—The mixture sits easily on his stomach, but his urine is still very scanty; swellings nearly as before: he has

still frequent loose stools, although he has used no electuary; pulse 98; heat moderate.

Cont. medicament. et \mathcal{R} Baccar. junip. 3ss.—Pulv. super. tart. potass. 3ss. Aq. Bullient. lb. ij. digere per horas quatuor, dein cola et colaturæ, adde spirit. junip. 3ij. Bibat partitis vicibus in dies. Let the gin punch be omitted.

Dec. 2d.—Takes his mixture regularly, but very little of his infusion; his urine is still very scanty and whey-coloured, but the swellings are somewhat diminished, and his breathing and cough easier; pulse 94; heat moderate; has still frequent loose stools.

Cont. medicament. Let the gin punch be repeated.

10th.—Urine about 3ij. turbid, with a white sediment; considerable cough; pain on pressure of the right hypochondrium; skin on the hip-bones becoming tender; belly very loose.

Int. medicament. et capt. tinct. scill. gtt. x. ex aq. cyatho bis indies. Inungetur abdomen omni vesp. ungt. hyd. dilutior. 3ss.

11th.—Urine lb. i. ss. with a copious sediment; stools less frequent; swelling of the belly increased, not very tense, and distinctly fluctuating; great œdema of the thighs; respiration very difficult; and expectoration, copious, apparently purulent; pulse 96; natural.

Rep. tinct. scillæ ter indies. Rep. ungt. hyd. et applic. partibus ulcerat. liminent. albumen ovi.

12th.—Is very much oppressed with difficult respiration, which he ascribes to the swelling; it is evidently increased, though not very tense; only two stools and his urine is scanty, and turbid; expectoration very copious; pulse 100; is urgent to be tapped.

Fiat paracentesis abdominis. Cont. Med.

13th.—Was tapped last night, and between three and four lbs. of a milky fluid were drawn off, which coagulated slightly with heat, and considerably with infusion of galls. He was greatly relieved by the operation, but his cough and expectoration continue, and he is prevented by pain from lying in a comfortable position; pulse 98, natural in strength; skin cool; urine above lb. i. turbid.

Rep. tinct. scill. et ungt. hyd. et capt. linct. opiat] cochlear parv. pro re nata.

14th.—Has passed a very bad night; expectoration se-

vere, and respiration difficult; pulse scarcely to be felt at the wrist; at the elbow 96; one stool; urine ζ v. very turbid.

Interm. ungt. hydrarg. Cont. alia. To have tea for breakfast.

15th.—Died this morning.

Dissection.

There were about ζ vi. of a limpid fluid in the cavity of the abdomen, but its viscera were of their natural appearance. About ζ i. ss. of a limpid fluid was found in the pericardium, but both pericardium and heart were of their natural appearance. A few ounces of fluid on each side of the chest; the lungs on the right side adhered at their anterior part by strong membranous adhesions, and by bands about one inch in length behind. On the left side of the chest, the pleura costalis and pulmonalis adhered closely to each other so firmly, that they could not be separated, and the lungs could only be removed by tearing out the pleura costalis from the ribs. When this was done, the lungs appeared reduced to one-fifth of their natural size, the pleura seemed converted into a sort of cartilaginous capsule. The substance of the right lung contained many tubercles, and its texture generally was indurated by effusion of serum into its cells. The substance of the left lung seemed to have entirely lost its cellular texture, was impermeable by air, and converted into a mass nearly of the consistence of liver. It was interspersed with tubercles in a state of suppuration, the other parts were of their natural grey hue.

A painting of the left lung, divided by a section through its whole length, was made by Mr John A. Schetky, Fellow of the Royal College of Surgeons, whose professional knowledge, combined with his consummate skill as an artist, enable him to represent morbid appearances with a degree of truth and effect that cannot be surpassed.

No. XXII.

Case of Phthisis Pulmonalis, with the appearances on Dissection.

R. C. Weaver, æt. 46.

Nov. 14th.—Complains of slight pain of head, vertigo, tinnitus aurium; rigors, after being long out of doors, not

succeeded by heat; pain of breast and left side of thorax, increased by full inspiration and cough, accompanied with expectoration of a yellowish and somewhat purulent matter, occasionally mixed with blood. He also complains of constant bad taste in his mouth; general languor and prostration of strength; great pain of abdomen, chiefly about the umbilicus, which is painful to the touch; frequent high coloured and foetid dejections, recurring mostly during the night, and attended with severe tormina and tenesmus; sleeps ill; pulse 86; tongue moist, but somewhat foul; appetite tolerable; thirst very urgent; countenance rather anxious.

Complaints began eight months ago, with pain of breast, cough and expectoration, and prostration of strength, and arose from exposure to cold and wet. Has frequently used cathartic medicines and cough mixtures, with only temporary relief.

He got in succession an electuary of supertartrate of potass and sulphur, thebaic pills, powder of myrrh, and supertart. of potass, and infusion of catechu, with tincture of opium, without advantage.

Dec. 2d.—Cough and expectoration as before. Complains of great weakness, and has a desire for solid animal food; pulse 92; belly still loose.

Capt. infus. catechu, thebaic. \bar{z} ss. post singulas dejectiones. Let him have a steak daily.

8th.—Had but two stools since last visit; cough and expectoration as before; has a strong craving for some cordial liquor; pulse 104.

Cont. omnia. To have half a bottle of porter daily.

December 11th.—Has had considerable diarrhoea, ascribed to taking porter; cough severe; incessant expectoration, copious and tinged with blood; pulse 108 and febrile.

Cont. med. Intermit the porter, and let him have rice and milk for supper.

12th.—Complains of sore throat from the severity of his expectoration.

Cont. med. et diæta, et inhalet vapores picis liquid.

Let him have a pint of milk daily.

13th.—Diarrhoea very severe. Complained much of the vapours, which increased the cough, but not the expectoration, which amounts to \bar{z} vi.

Cont. diæta et vapores, sed int. infus catechu, et capt. opii gr. i. bis indies.

14th.—Fumes of the tar caused no increase of cough, expectoration rather diminished, but the looseness is severe and distressing.

Cont. med. et capt. potion. carbonat. calcis ℥ij. post singul. dejection.

15th.—Diarrhœa much diminished; cough free and breathing less oppressed; pulse 92.

Cont. omnia.

16th.—The fumigation this morning excited very severe coughing, which induced acute pain at the lower part of the right side of the thorax. Three stools since yesterday; pulse 94.

Int. vapores picis. Cont. opium et mist. cretacea.

Habt. etiam trochisc. glycirrh. cum opio No. x.

17th.—Less cough and expectoration, but severe diarrhœa has returned; pulse 94, natural.

Rep. potio cretacea et capt. opii gr. i, bis indies.

18th.—Diarrhœa severe and mixed with blood; pain on the right side from coughing, confined to the region of the liver.

Applic. vesicat. parti dolent. Contr. med. et inj. enema amyli cum tinct. opii gr. L.

19th.—Respiration difficult, and he cannot turn from the right side; purging continues; pulse 92.

Int. pilul. opii. Cont. mist. cret. et inj. enema anod. statim, et rep. vesp. si opus sit.

24th.—Is not able to retain fœces or urine; cough diminished; pulse 108; very small.

Cont. med. et ℞ Lichen Island. ℥ij. aq. font. lb. iv.

Coque ad ℥ij. et exprime decoct. Vapora ad lb. i. et adde syr. simpl. ℥i. stet ut geletur, et utatur gelatina ad libit.

27th.—Died this morning.

Dissection.

On opening the thorax, considerable adhesions were found on both sides of the chest. The lungs externally were generally of a healthy colour, and on passing the hand over them their substance felt natural and spongy, but beset with small bodies of a bony hardness. On attempting to take out the right lung, the knife was necessary to divide the ad-

hesion at the upper and posterior part, and a quantity of pus escaped from a cavity capable of containing six ounces, of a very irregular shape, partially divided by irregular septa of a firm texture, and lined with a membrane, through which protruded the remains of a great many small bronchi, to the length of one-eighth or one-tenth of an inch. This vomica was situated in the upper part of the lung, and on further dissection, another was found also in the upper part nearly similar in shape and size, but still filled with pus. On dividing the substance of the right lung, it was found to contain a great many tubercles of different sizes, from that of a pea to that of a small hazelnut, and in various states of progress, some hard and cartilaginous, others soft, and some converted into thick pus. They seemed to be encysted or separated from the substance of the lung by a very distinct and firm membrane. The larger branches of the bronchi were not particularly examined, but the smaller ones divided in the dissection contained a muco-purulent matter. The intertubercular substance of the lungs was not indurated or apparently diseased, and in general the lower part of all the lobes, especially towards the edges, was, with the exception of the presence of tubercles, sound and fit for the purposes of respiration. The left lung contained no vomica, but its substance was similarly affected. The heart was in every respect sound. The other cavities were not examined.

No. XXIII.

Effects of the Fumes of Tar, in a case of Phthisis.

T. M'G. Shoemaker, æt. 20.

Was admitted on the 14th November, labouring under symptoms of confirmed phthisis pulmonalis of twelve months standing; great debility; laborious respiration; pain of side, increased by full inspiration and pressure; severe cough, with purulent expectoration and hæmoptysis; sore throat; headach and vertigo; occasional diarrhoea; night sweats; great thirst; bad taste of mouth; pulse 120.

He had been treated with venesection, blistering, anodyne demulcents, hemlock, and cinchona, without any amelioration. On December 11th, the report states, that chiefly after taking food, and on being exposed to cold, he has violent fits of coughing, which bring on vomiting. On the 12th he was directed to inhale the tar vapour for an hour, four times a day.

Dec. 13th.—The tar vapour has been breathed twice. He was little affected by it at the time, but thinks his breast freer, and complains of dryness of his throat.

14th.—Finds the fumes of the tar agreeable; cough diminished; respiration much freer, but has pain in the left side.

Cont. vapores, et applic. vesicat. part. lat. dolent.

15th.—Breathing decidedly freer.

16th.—Continues to feel his breast much freer.

The use of the tar vapours was discontinued.

19th.—Respiration freer since he began the tar vapour, which he wishes to be renewed.

23d.—The fumigation was repeated last night and this morning, but it seemed to be carried to excess, and excited a good deal of coughing, with expectoration. It produces a sense of heat in the nostrils, with a very perceptible taste in the mouth; reports himself relieved by it, and had less perspiration during the night, but complains of rheumatic pains, and trembling of his limbs from weakness.

24th.—Reports himself much better, but the night-sweats have returned. Continue.

25th.—Breathing freer; sweatings continue; cough and expectoration increased. Continue.

Jan. 13th.—Since he came into hospital the pain of chest has been much relieved, and his respiration is much freer, but the night-sweats continue, and he has lost strength.

Recommended to return to his native place.

No. XXIV.

Case of Apoplexy, with the Appearances on Dissection.

J. T. æt. 45.

December 16th, Hora 8va, P. M.—Was brought into the hospital about eleven o'clock last night, in a state of complete insensibility, and, from the report of the persons who brought him, nothing more could be learned than that he had been lying for several hours in the same state in a wood-yard at Leith, without any attention being paid him until the workmen gave up working, when he was sent here by the policemen. Immediately on admission, he had his head shaved, and a purgative and domestic enema were given, both of which operated freely. This evening he was brought down to this ward, having some degree of stertorous breathing, and the pulse of the right wrist not to be felt; about forty ounces of blood were taken from the arm, which restored the pulse of the right wrist; and he could then attempt to answer questions, and put out his tongue when desired; yawned much as if sleepy, and swallowed liquids when offered him. His pupils, however, did not contract in the smallest degree when a candle was brought near them.

Applic. vesicat. capiti. R Submuriat. hydrarg. gr. vi.

Pulv. jalap. ℥i. M. Capt. pulv. hujusmodi Stia qq.
horâ donec plene respond. alvus.

17th.—Was much relieved by the bleeding, and has some return of sensibility, and gave some assistance in putting on a shirt. His right side is quite paralytic, and the pulse is with difficulty felt at the wrist. His tongue, when protruded, is drawn to the left side, and his pupils are insensible to light. Pulse 84; moderately strong. Could not be made to take the whole of his powders; blister has not yet risen.

Capt. pulv. antimon. gr. iij. omni horâ ad emesin
vel catharsin, et nisi alvus respond. injic. vesp.
enema purgans.

18th.—Could not be made to swallow the powders, but the injection operated freely. Has taken neither food nor drink since he came in; and he seems worse; breathing more laborious; and the left arm is paralytic, as well as

the right, but he moves both legs; pupil insensible to light; pulse 92, moderately full in the left arm, and not to be counted in the right.

Int. med. et injic. enema nutriens ex jusculo domest.
ter quaterve indies.

19th.—Died last night.

Dissection.

The dura mater presented no unusual appearance on either surface. Betwixt the arachnoid membrane and the pia mater, there was only the slightest effusion of serous fluid. There was considerable congestion in the venous capillaries of the pia mater, and in the meshes of this membrane. On the lower and anterior part of the left anterior lobe of the brain proper, there was a slight ecchymosis, forming a spot about half an inch in diameter. The brown coating of most of the convolutions of the left hemisphere of the brain proper was in an ecchymosed state, particularly in the lower convolutions of the hemisphere. It was scarcely perceptible on those nearest the falx. The appearance was not such as could be produced by mere congestion of blood in the capillary veins of the brown substance, but was obviously of that kind which is occasioned by an escape of part of the blood from the fine vessels. The upper part of the left corpus striatum was wholly broken down, looking like a mixture of coagulated venous blood, and medullary matter; yet there was no effusion of blood into the ventricles. This disorganization extended outwards through the substance of the hemisphere, along the whole outer margin of the corpus striatum, until, at one small point, it came into contact with the bottoms of the convolutions overhanging the fossa Sylvii. The other parts of the brain proper were quite healthy. On cutting open the fourth ventricle from behind, a small coagulum of venous blood, of the size of a pea, was seen adhering to the lower parts of its anterior wall, extending from the median fissure a little to the left; and on dividing the annular protuberance in the median plane, this coagulum was discovered to be part of a small mass of clotted blood which had been effused into the substance of the protuberance, and some streaks of blood extended forwards in a horizontal direction, evidently in the course of the venous vessels, which penetrate from the anterior to the posterior surface of this

body in the median plane and its vicinity. In point of breadth, these bands of effused blood were about an eighth of an inch on the left side, and a sixteenth on the right. The other parts of the cerebellum were quite healthy.*

JOHN GORDON, M. D.

No. XXV.

Case of Apoplexy.

J. D. æt. 22.

Dec. 3d, 1817.—Has total loss of power of the left arm, and left lower extremity, with an occasional feeling of pain and numbness in both. When motion is performed at the wrist, she is affected with severe pain at the shoulder joint. Complains also of occasional and very severe headach; vertigo with tinnitus aurium, and dimness of sight; pulse 96, and weak; belly rather bound. Catamen. have not appeared for six weeks; for the last two days she has been affected with suppression of urine; appetite bad; sleeps ill.

The affection of her arm and leg first commenced about seven weeks ago, and has gradually increased. Attributes her complaint to over fatigue and cold.

Has used some remedies, the nature of which she does not know.

4th.—Abradat. capillit. et applicet vesicat. capiti. Bibat inf. lini ad libit. Abstrahatur urina cathetere si opus sit, et injr. enema domestic. vesp. nisi prius respond. alvus.

5th.—The stupor continuing to increase, yesterday afternoon, twenty ounces of blood were drawn from the jugular vein. Blister discharged very little. Was unable to swallow the purgative powders which were directed, and purgative injections were not retained. The state of torpor continues the same as before, and the respiration is often very laborious, and with stertor. The pulse, formerly slow and full, is now 118, and very small.

* An excellent painting of this section was executed for Dr Gordon by Mr Schetky.

Applicent. sinapis. pedibus, et iterum applicetur vesicat. capiti.

6th.—Died last night about six o'clock.

Dissection.

7th.—A considerable portion of the brain proper was found disorganized. In place of the natural medullary or nervous matter, there was a substance of the appearance of custard, in which not the slightest vestige of the healthy structure could be recognized. To the eye it looked like broken down medulla, and a little serum alternately mixed, and was of a much looser texture than healthy nervous matter, yet it possessed very considerable toughness, and gave the idea, from its tenacity, of its being in part composed of fine cellular substance; no blood-vessels were apparent in it. This disorganization was similar to what Dr Gordon has repeatedly observed in the brain of persons who had suffered an attack of apoplexy or palsy four or five months before death.

This disorganization extended from before backwards, at its greatest length, from a point corresponding to the exterior extremity of the corpus striatum, to one corresponding to the posterior extremity of the corpus callosum. The base did not extend further downwards than a plane passing horizontally through the hemisphere, on a level with the upper surface of the thalamus opticus internally, or on the side next the ventricle. It followed nearly the course of the border of that part of the corpus striatum which projects into the ventricle, and was separated from that cavity by a layer of white nervous matter, not more than one-eighth of an inch thick. Opposite to the middle of the corpus callosum it extended into that body for about one-eighth of an inch, towards the median plane, about half an inch from before backwards, and had penetrated through so much of its thickness, that a stratum of the natural substance of this body, more than one-twentieth of an inch thick, intervened between the disease and the cavity of the ventricle, and a layer, one-tenth of an inch thick, between it and the upper surface of the corpus callosum. Above the level of this body it had destroyed about one-third of the base of two or three convolutions which project from the inner or median surface of the hemisphere. In the direc-

tion outwards, the disease had extended as far as the very apices of two or three of those convolutions which overhang the fissura Sylvii, destroying almost all the internal white substance of these convolutions, only a thin layer of one-twentieth of an inch being left of it, on which the brown matter rested. Between the fissura Sylvii, and the inferior inner margin of the hemisphere, the disorganization had made similar encroachments. It had encroached more or less on the basis of all the convolutions, and in some had penetrated to their apices.

From this dissection it appears, that, with the exception of the small part of the corpus callosum which was affected, the destruction was confined to that mass of white nervous matter connected below with the expansion of the crus cerebri, and the outer wall of the capsule, on which the bases of the inner, upper, and outer convolutions of the middle hemisphere rest. There was no apparent disease in any other part of the substance, either of the brain proper or cerebellum. It was every where rather firmer than it generally is so many hours after death. There was an enlargement of the posterior cornu of the left ventricle, and where it communicates with the inferior cornu, but not the least appearance of increase in the anterior part of this ventricle, nor in any portion of the other ventricles. In this enlarged cornu there was found about one ounce of a clear and perfectly colourless fluid. The membranes of the brain were perfectly healthy; not the least effusion between the arachnoid membrane and pia mater, either above or at the basis of the brain. Upon lifting up the dura mater from the surface of each hemisphere, the surface of the arachnoid membrane presented the appearance of *dryness*, which Dr Gordon has often observed to indicate effusion into the ventricles, or disease of the substance of the cerebrum.

JOHN GORDON, M. D.

No. XXVI.

Case of Dyspnœa and Epilepsy, treated with Galvanism.

J. D. aged 40, of a strong constitution, but irritable habit, Sempstress in a Silk Manufactory.

June 2d 1818, Hora 8va.—Is affected with severe cough, dyspnœa, expectoration, and dull pain in the lower part of the chest, on the left side. In the erect posture, she can take a full inspiration with little uneasiness, but all her complaints are aggravated by the recumbent posture, which immediately induces wheezing. She consequently sleeps ill, and is often obliged to sit up the greater part of the night to procure breath; at which time she has long and violent fits of coughing, which agitate her whole frame, and occasion flying pains of the chest. She spits much, and always with difficulty, but ultimately with relief. The sputa are thin and mucous during the day, but became more viscid after sleep. In the morning her mouth is frequently filled with dark blood.

Pulse 92, small and not weak; heat 101; perspiration naturally free; tongue clean; little thirst or appetite; bowels open; urine natural; catamenia regular. She feels much weakened, and has slight swelling of the feet.

The patient has been subject, for the last thirteen years, to epileptic fits, originally occasioned by grief and distress, and had two within the last week. She ascribes to them a constant tremor in the right leg, and occasionally in the right arm also, with which she has been affected for several years past.

Her pectoral complaints first commenced about two years ago, at which time she was under the care of Dr Spens in the Infirmary, and received great relief.

The present attack began six weeks ago, and has been gradually getting worse.

She attributes it to cold, having been much exposed to wet feet during the winter.

She got purgatives, and first squills, and then digitalis, with relief to her dyspnœa. She had a fit of epilepsy during the night, be-

tween the 6th and 7th of June ; on the 12th she had feelings as if a fit were coming on, and it actually took place in the night between the 13th and 14th. On the 20th the report states that she has had a singular sensation, resembling a fluttering at the heart, which always precedes, though it is not always followed, by one of her fits. She was now ordered to take a pill of ammoniac of copper three times a day, and they were continued as long as she remained. During the night of the 20th her fit did not come on, although it had returned twice before, at an interval of exactly seven days, and she had no fit afterwards while in the ward. One imperfect trial of galvanism was made on the 22d with a bad apparatus, and without any effect. On the 30th it was used efficiently, as appears by the following reports :

July 1st.—Galvan. applied twice since last visit, and she thinks her breathing relieved after it ; tolerable night, but rather more cough and defluxion this morning, with blood. Pills operated five times, other complaints as before

Intermit. pil aloes. Cont. alia.

2d.—Galvanism induced coughing last night, relieved by some expectoration ; had a good night, and the morning, fit of dyspnœa is much diminished ; some headach.

Intermit. pil ammon. cupri. Cont. galvanismus.

3d.—Bowels rather costive ; headach towards morning ; respiration improves.

Cont. galv. et capt. pil. colocynth. ℞ss. et si opus sit rep. dosis.

4th.—More sensible to the effects of the galvanism ; dyspnœa nearly gone, but still some cough and bloody expectoration as usual. Took four pills, which operated several times ; has had headach for several mornings.

Intermit. pil. colocynth. Cont. galvanism. Capt. infus. valerian. unc. 2 omni bihorio.

5th.—Morning headaches continue, but her functions are regular, and other complaints decreasing.

Cont. infus. val. sylv. et galvan.

6th.—Had a bad night from headach ; disagreeable dreams and startings ; dyspnœa still better ; morning cough as before, but more blood in the sputum.

Intermit. med. et ℞ Infus. sen. ℥iv. sulph. mag. ℥ss. solve. Capt. ℥ij. et rep. dos. si opus sit.

7th.—Took half of her purgative mixture, which operated severely, with tormina. At night she got ℥i. of peppermint water, with 20 drops of laudanum, which gave her

much relief; this morning less headach; cough severe, but less blood in the sputum.

Rep. galvanism, et capt. mist. scil. ℥ij. omni trihorio.

8th.—Slight headach, and ascribes much relief to the squill mixture; otherwise better.—Cont.

On the 15th she was dismissed much relieved.

No. XXVII.

Case of fatal Diarrhœa, with Appearances on Dissection.

A. F. Labourer, æt. 60.

10th November.—Complains of great prostration of strength; slight rigors, not succeeded by heat; pain of breast and abdomen, chiefly about the umbilicus, not aggravated by pressure; frequent yellow, and generally fluid dejections, more particularly during the night; severe tormina and tenesmus before each evacuation, and these always recurring on taking either food or drink. Pulse natural; surface cool; tongue moist, but slightly furred; appetite and thirst also natural; but is deterred from taking either food or drink, from the fear of inducing the diarrhœa.

Was attacked three weeks ago with the diarrhœa, and a sense of coldness of the inferior extremities, occasioned, he reports, by exposure to cold and wet. Has used no remedies but one dose of castor oil.

This patient, after having his bowels emptied by an ounce of phosphate of soda, was treated with infusion of catechu and opium, prepared in the neighbourhood of Edinburgh, by Mr Young, surgeon, but without any material alleviation of his complaints, and he died on the 4th of December.

Dissection.

The peritoneal covering of the abdomen, particularly below the umbilicus, was thickened, opaque, and mottled with round red spots. The serous membrane covering the small intestines, and still more that covering the great intestines,

had undergone similar changes, in particular about the ileum and the descending part of the colon; and flakes of coagulated matter could easily be scraped off these intestines. The serous membrane forming the falciform ligament of the liver was thick and opaque, and thickly spotted with the red spots; but the serous membrane covering the liver itself appeared healthy, as also that of the stomach, spleen, and urinary bladder. Upon cutting into the ileum, no morbid appearances were observed, but upon cutting into the descending arch of the colon and rectum, they were found much thickened; and, at several places, the internal membrane of the intestines was partially, and at others completely removed, marking the intestines as small-pox does the skin; in the cavity of the abdomen, about six lb. of a light-yellow serum, with flakes of a similar colour.

No. XXVIII.

Case of Diabetes, with Appearances on Dissection.

E. C. æt. 42.

November 20, 1817.—Is much emaciated, and complains of great general debility. The whole abdomen is much swollen and tense, and affords a sense of fluctuation. Has a copious flow of urine, reported to be of a sweet taste, and of the colour of whey, which passes off involuntarily when she gets warm in bed, but she easily retains it through the day when she is out of bed. Pulse 87; tongue white; bowels reported regular; urgent thirst, with voracious appetite; also complains of dimness of sight; and, upon inspection, the crystalline lens of both eyes is of an opaque white colour; was first attacked with the above complaints about two years ago, since which time they have gradually increased. Was admitted into the hospital about four weeks since, and is much the same as she was then, except the involuntary passage of her urine through the night, which has commenced since she came in. Has taken an anodyne draught ever since she was admitted, with some purgative powders, which she left off about eight days ago.

She was put upon animal diet, and got purgatives, tinct. cantharidis, and a variety of drinks, with mercurial frictions upon the abdomen, without any benefit. The quantity of her urine continued about lb. xiv., while that of her ingesta was about lb. x. daily, proving a very considerable absorption from the atmosphere, either by the lungs or skin, or both. She first complained of strangury on December 1st, and about the middle of that month she lost her appetite, which had been previously voracious. About the same time she began to complain of excruciating pain in the back, which continued with little intermission to the last. The more interesting changes are noticed in the following reports.

Dec. 1.—Urine fifteen lbs.; drink ten lbs.; swelling as before; complains of considerable uneasiness from a stranguous affection; frequent loose stools; pulse 88; heat natural.

12th.—Ingesta eleven lbs.; urine fifteen lbs., as before, besides a quantity passed in bed; tumour of the abdomen increasing in size, circumscribed, extending from about an inch above the umbilicus, to the left ilium, and as low as the pubes; the upper part of the abdomen natural in appearance; body in general emaciated, and she complains of increasing weakness for two or three days past; her appetite has decreased much, but thirst still excessive; had four stools from a rhubarb bolus.

13th.—Ingesta about ten lbs.; urine fourteen lbs. of a very pale whey colour, and did not coagulate with heat until it was considerably evaporated; with the infus. of galls it formed a slight coagulum, after standing some time; swelling increased an inch since yesterday; pulse 84, full; complains of great heart-sickness.

Contr. ung. hydr. Let her have a pint of porter daily, and for drink ten lbs. of water, very slightly acidulated with sulph. acid.

14th.—The tumour is not at all translucent, although, on the upper part, its parietes are very thin, and fluctuation is distinctly felt through every part of it; is very painful, even when not touched, especially at both extremities; sickness very severe; appetite much reduced; urine fourteen lbs. as before, ingesta eight lbs.; relishes her acid drink; pulse 90, natural.

Contr. med. et cap. hora somni pil. Theb. gr. x.

27th.—Ingesta nine lbs.; urine not measured, but when she desires to make it, the pain is excruciating, until she

gets relief from sitting over the steam of water; medicine operated well.

Int. omnia, et capt. aq. laurocerasi gtt. xv. ex aq. cyatho, ter indies.

28th.—No apparent effect from the drops; ingesta ten lbs.; urine not measured; pain still continues.

Cont. aq. lauroceras. sed capt. gtt. xv. quatuor in dies. Applicet emplast. opiatum parti dolenti; to have four ounces of wine daily.

30th.—No better; pulse 100, of good strength.

Intr. aq. laurocer. et haustus. Fiat venesectio ad z viii.

Capt. hor. somn. opii gr. iii. et abstrahatur urina ope catheter.

31st.—Blood drawn covered with a tough buffy coat, with a little separation of serum in the first cup; no relief from the bleeding; pulse 106, moderate strength; bowels costive; catheter not employed.

Rep. haust. ex ol. ricini. Contr. opium.

Jan. 1.—Medicine operated, but complains of inability to swallow, and the fauces have been ulcerated, for four or five days; tumour less than it has been, and gives a distinct sense of fluctuation; pulse 104.

Rep. haust. ex ol. ricini, et \mathcal{R} Subboratis sodæ, z i. tere in pulverem et misce cum mellis z i. ut fiat linct.

Rep. opium.

14th.—Complains greatly of weakness; urine is much reduced in quantity; thirst and appetite gone; tongue clean; no particular pain; skin on the trochanters tender; pulse 100; skin moist.

Contr. med. et curentur partes affectæ liniment. album. ovi.

15th.—As yesterday. Cont. med.

16th.—Sunk this morning about seven o'clock. Just before death urine began to drop from her, and, upon putting the hand on the tumour, it flowed more freely, till in all about ten lbs. discharged, and the tumour became quite flaccid. This urine was higher coloured, and more urinous in its smell than any lately passed.

Dissection.

The left kidney was about a fifth larger than usual in a full grown female, but of a natural form; the right was less enlarged, and of its proper figure also. The internal

structure of both was quite natural; the distinction between the light and dark coloured parts being well marked in both, with a slight congestion in the capillary veins in the line between the two. The calyces in each were enlarged, in proportion to the increase in general size; and both the ureters were about one fourth of an inch in diameter. The remarkable tumour perceptible above the pubes during life, was found to depend on an enlargement of the bladder. This viscus was of sufficient size to contain 5 lbs. of urine, and about that quantity was found in it after death. It had its natural form; and its parietes were rather thinner than usual; although the muscular fasciculi were very well marked. Its inner coat presented a perfectly healthy appearance, and the ureters entered below, in the usual manner. The peritonæum was reflected upwards from its anterior part an inch and a half higher up above the pubes than in a healthy person. It was covered before only by a thin expansion of tendinous substance, like the widened-out linea alba, the muscular part of the recti muscles, &c. having disappeared, and their place being occupied by this tendon. Externally to this lay the common integuments, which were also a good deal thinned.

The stomach and intestines were in a healthy state. The adipose substance between the folds of the peritonæum, in the mesentery, &c. behind it in the region of the kidneys, and in the substance of the omentum, had entirely disappeared; there remaining only a small quantity of cellular substance.

The mesenteric glands were more distinct than usual, and the smaller ones enlarged a little; but they were of a natural colour and consistence.

The sympathetic nerve, on both sides, from its entrance through the diaphragm into the cavity of the abdomen to its descent into the pelvis, was enlarged to about three or four times its usual size; and there was an increase in the size of the splanchnic nerve, on both sides, to the same extent, from about two inches within the cavity of the chest, until it perforated the diaphragm.

The other viscera within the cavity of the abdomen, and the contents of the thorax, were natural.

J. GORDON, M. D.

No. XXIX.

Case of Diabetes complicated with Phthisis Pulmonalis.

J. B. Labourer, æt. 26.

May 8th, 1818.—Complains of great debility and pain extending from the left hypochondrium to the scapula of the same side, which is increased on full inspiration, and has continued for about a week; is much emaciated. Pulse 105, of good strength; heat natural; appetite unusually great; tongue clean; great thirst; skin dry; urine voided in the quantity of from twelve to fourteen pounds in the day. Bowels costive; sleeps badly, and dreams much; lies easiest on his back, and feels a pain when lying on either side, particularly the left.

Has been affected more than three years with weakness, great thirst, and an increased evacuation of urine. About nine months ago was affected with pain of chest, cough, and expectoration; and about six weeks ago had a pain extending from the right hypochondrium to the right scapula, which continued about ten days.

Was lately under the care of Dr Spens, when he took aloetic pills, and was put on full diet, which, however, is not sufficient to satisfy his appetite.

Rx Mas. pil. aloet. gr. vj. gambog. gr. ij. M. fiant pil. duæ h. s. sumend.

He got purgatives and increased diet. On the 11th of May a difference was observed between the urine made first in the morning and that during the day; the former being of a full yellow colour, and having its natural urinous state; the latter very pale and sweetish. The total quantity was pretty uniformly lb. x. His pectoral complaints increased. On the 19th of June he was put upon animal diet. On the 22d 3x. of blood were taken from his arm, which coagulated very firmly, with whey-coloured serum of a saline taste. On the 23d an angry phlegmon was observed on his right under-jaw, which was connected with the bone. He had hæmoptysis on the 28th, which continued to return, and his sputum became heavy, membranous, and globular. The quantity of his urine continued about ten or eleven pounds; that made in the morning generally had

a wine-yellow colour, was bitter and salt, of sp. gr. 1042; and that of the evening was pale, sweet, and sp. gr. 1034. When the ward was shut he was evidently sinking under the combined effects of diabetes and phthisis pulmonalis.

No. XXX.

Case of Diabetes and Incipient Phthisis, with the Appearances on Dissection.

L. M'L. a girl, aged 18.

March 30th.—Is affected with excessive thirst and hunger; urine pale, pellucid, and sweet, sp. gr. 1031; greatly increased in quantity; abdomen tumid; excessive emaciation; great debility; occasional pain of head; vision somewhat dull. Pulse 98, very weak; tongue clean; bowels costive. Catamenia per annum defecere. No perspiration, and skin has a harsh feel.

Disease commenced about a year ago, with anorexia; pain of stomach, and occasional vomiting of a fluid like water; and shortly after an increase of urine, great thirst, and desire of food were observed.

Attributes her complaint to cold, and has used no remedies.

She was treated with animal diet, cinchona, uva ursi, lime-water, and afterwards Port wine. Her ingesta were about ten pounds daily, and her urine eleven pounds. On the 2d of April a large phlegmon appeared on her arm, which was opened on the 9th, and discharged much bloody purulent matter. On the 14th the vision of her left eye was reported to be lost by a catarrh after admission.

April 22d.—Left the hospital for her mother's house, where as much care and attention were paid as circumstances would permit. No journal could be kept, although visits were paid almost daily.

May.—For a few days the patient became very low, and appeared much exhausted. Feet œdematous, and generally cold in addition to the former symptoms, so that death was hourly looked for. About the 28th, she again recruited a little. A tumour with some fluctuation was observed about the 29th in the right iliac region, also a small

tumour of the same kind on the side of the anterior part of the neck, just above the clavicle. The patient seemed more irritable than she had lately been, with occasional heats. Pulse quicker, but weak; the tumour of the neck burst, and discharged a good deal of pus. That of the right ilium was punctured, and discharged, until death, much pus and ichor. Lower extremities greatly œdematous, and most generally cold, though occasionally one or both very hot and inflamed. Great dyspnoea, with cough as if from effusion in the thorax. The vision of *both* eyes almost completely gone. Surface, in general, cold and dry; at times fits of heat, sometimes local, but no perspiration at any time; pulse 90, 110, 115, and 120; urine as before in quantity and appearance, until a day or two before death, when it was somewhat turbid, which was afterwards known, from dissection, to be purulent. It was not accurately measured, nor were the ingesta. Thirst constant; tongue moist and livid; an occasional craving for food, (animal, such as beef-steak, preferred,) and wine, or porter, continued to the last; no nausea nor sickness till within an hour of death; bowels in general pretty regular, occasionally loose, but no purging; in general little sleep; no delirium; much pain and restlessness; great dyspnoea; expectoration of viscid mucus, with a little pus occasionally.

She got from the Dispensary, Supert. potass.—acid. sulph. dilut.—tinct. opii ammon.—tinct. opii,—liniment. opii ammon.

Wine and porter were provided.

Died 23d May.

Dissection.

24th May 1818.—In the thorax were observed slight adhesions between the pleuræ; a very small quantity of serum in each cavity; a small abscess between the pleura and intercostal muscles of the third and fourth ribs of the left side; a number of very small vomicæ in the lungs, and about $\frac{3}{4}$ iv. of fluid in the pericardium. In the abdomen, an increased vascularity about the pyloric extremity of the stomach; the mesenteric glands were generally enlarged, and in some of them was seen a gritty chalky-like substance; the kidneys were somewhat more enlarged and harder than usual, and pus was seen exuding from the

papillæ when laid open. There was a very large abscess which extended from the spine to the anterior part of the right iliac region, and occupied the entire space between the ilium and lowest rib; it was in contact with the capsule of the right kidney but *had no connection whatever with the internal part of that organ*. Pus was observed in the course of the ureter and in the bladder. In the other viscera nothing morbid was observed. The liver was *remarkably healthy*. In one eye the crystalline lens was absorbed, and a substance resembling a grain or two of sand was seen on the anterior part of the vitreous humour; the cornea was opaque and hard. The other eye was given to Dr Gordon, who reports, that the crystalline lens was found pretty entire, but there appeared some adhesions of the iris. The extent of emaciation was extreme throughout, the fat about the omentum and heart being nearly gone, the omentum having the appearance of a tissue of vessels; the muscles were generally pallid, and the cellular texture was œdematous. It is to be regretted that the suspicion and impatience of the friends would not allow more time and opportunity to examine some of the blood-vessels and nerves.

No. XXXI.

Ulcus Palati after Poisoning by Nitre.

C. A. æt. 23.

Jan. 1, 1818.—Situating in the middle of the palatum molle there is a pretty large irregular hole, and of considerable depth, destroyed by ulceration; the uvula likewise, and a considerable part of the velum palati seem to be eradicated by the same disease. Complains of no pain, but in the morning when she awakes the parts feel dry, and uneasy until they are completely moistened with saliva. She experiences no inconvenience in speaking or eating, but has difficulty in swallowing fluids, which pass up into the nostrils with a disagreeable sensation, and considerable pain, but there is little discharge from the ulcerated parts; pulse

80, of natural strength; tongue whitish; bowels regular; catamenia regular; appetite good: little thirst.

She states that nine months ago she took about two ounces of nitre, given to her by mistake for Glauber's salt, which, in about ten minutes after they were swallowed, caused a great swelling of the abdomen, with severe burning pain at the epigastrium, vertigo, and pain of head, with pains all over the body; fifteen minutes afterwards, she had severe nausea, and vomiting of a copious bloody fluid, which, in passing through the fauces, caused considerable pain and excoriation. Next day she had severe pain all over the abdomen and thorax, which could not bear the slightest pressure; loss of appetite, languor, and general debility.

The soreness of the throat continued for nearly a month afterwards, and it has ever since been very tender. About three months ago she had a slight itchiness at a small point in the middle of the palatum molle, now occupied by a large irregular hole, which gradually spread backwards, and destroyed the uvula, and the greater part of the velum palati. Has used no other remedies but lime juice and water, with which she gargles her throat.

This woman soon got well by the use of astringent gargles.

No. XXXII.

Case of Change of Colour from Brown to White, in a Native of Bengal.

J. W. æt. 56.

May 8, 1818.—A native of Bengal, his parents Mahometans, and both dark; left India about the age of ten or eleven, and has since resided in Edinburgh, chiefly as a servant, but since the last nine years as a mason's labourer, and pursuing other casual employment. During this period he has gradually lost his native dark colour, and become white, which he attributes partly to the climate, and partly to the action of lime and mortar, in his occupation as a mason, which occasioned much itching of the skin. The change

commenced in the hands and head, the hair from being black and lank, has become light grey, and somewhat curled. The parts which last retained their colour, were the breast and back of the neck. The only remains of his original complexion at present are some irregular patches of a dull purplish colour covering the upper parts of the cheeks, and prominences of the ears, and a lighter patch at the tip of the nose. During the change of his colour, no sensible alteration was observed in his health. *

The complaints for which he was admitted were so slight that it is unnecessary to state them.

* See a similar case in a negro in the Duke De La Rochefoucault Liancourt's Travels through the United States, Vol. III, p. 263.

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