## The Abernethian society, St. Bartholomew's Hospital: Report of the proceedings. Session 1876-77.

### **Contributors**

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# ABERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

# REPORT OF PROCEEDINGS.

SESSION 1876-77.

LONDON:

SMITH, ELDER, & CO., 15 WATERLOO PLACE.

1877.

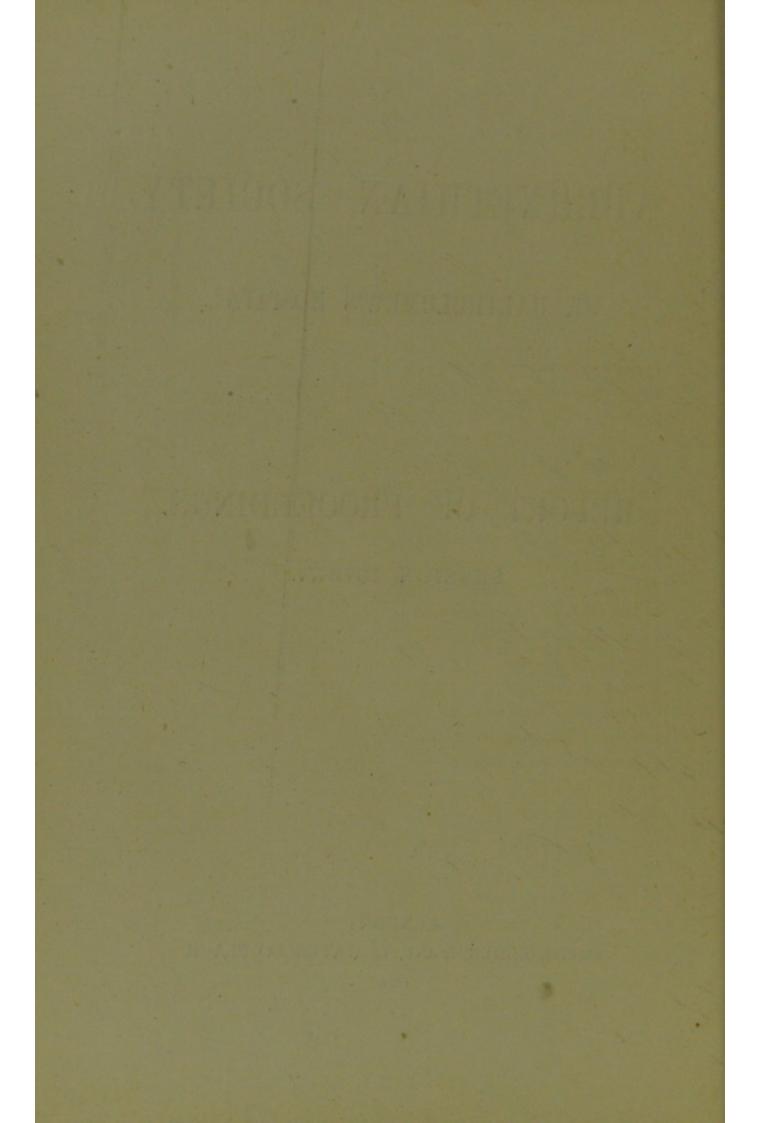
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THE ABERNETHIAN SOCIETY having determined in Special Meeting that it was advisable to publish a Report of its Proceedings, appointed a Committee to carry the project into effect. The Committee therefore drew up the following Rules, which were accepted by the Society at the General Meeting:—

- I. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.
- That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.
- 3. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.
- 4. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.
- 5. That these Rules be also printed in each copy of the Proceedings for the information of Members.

### SESSION 1876-77.

### OFFICERS.

Presidents—MR. KEETLEY AND MR. MACREADY.

Vice-Presidents—DR. WHARRY AND MR. MILLS.

Honorary Secretaries—MR. PYE AND MR. DARBISHIRE.

LIST OF GENTLEMEN WHO HAVE BECOME MEMBERS OF THE SOCIETY DURING THE PAST FIVE YEARS.

1872-73.
Alderton, F. G.
Andrews, S.
Baillie, R. H.
Brumell.
Cobbold, G. W.
Cooper, A.
Cretin, E.
Day, C. H.
Dixon, T. A.
Dunn, H. B.
Evans, F. W.
Field, A. F. F.
Hales, R. T.
Hall, F. de H.
Harris, V. D.
Harrison, C. E.
Hastings, G. J'Anson, W.
J'Anson, W.
Livesay, E. W.
Macready, J.
Moore, C. A.
Ormerod, J. A.

Pooley, W. M.
Roeckel, W.
Rule, G. H.
Russell, J.
Sheehy, W. H. P.
Sloman, H.
Smith, G.
Steavenson, W. E.
Ward, A. G.
West, S. H.
Williams, A. G.
Williams, J. W.

1873-74.

Carcenac, E.
Edwards, A. E.
Farrington, D. W.
Ferrand, C.
Glyn, H. A.
Hames, G. H.
Hart, N.
Heath, W. L.

Hepburn, A. Hindle, G. R. Howat, G. Hutton, E. R. Jackman, G. F. Keetley, C. R. B. Little, H. S. Lucas, H. O. Malden, F. Peacey, W. Peevor, H. Prosser, T. G. Pye, W. Ranking, G. S. A. Robertson, F. F. A. Schofield, R. H. A. Shoolbred, W. A. Smith, Gerald. Spooner, F. H. Thomas, J. R. Watts, F. Wharry, R. Wilmot, J.

1874-75.

Abercrombie, J. Adams, J. Bamber, C. J. Bateman, A. G. Calcott, J. B. Campbell, J. M. Chapman, H. F. Clarke, W. Bruce. Collingridge, W. Cripps, E. C. Dennys, G. W. P. Dingley, A. Edmunds, R. Edwards, F. S. Eve, F. S. Gabb, C. B. Good, F. T. Kidd, P. Lyons, Isidor. Paget, G. E. Patterson, G. H. Roughton, J. W. Thurland, F. E. Waylen, S. A. Weiss, H. F.

1875-76.

Adams, A. P.
Anderson, A.
Ashton, C.
Baker, W. J.
Baker, W. T.
Blaikie, J.
Blakeney, H. F. B.
Bradford, A. S.
Bradshaw, J. D.
Bruce, R
Burgess, W.
Burlton, A. H.
Colenso, R. J.

Craddock, F.

Craven, R.
Cumming, R. F.
Cuthbert, C.
Cuthbert, W.
Dingle, W. A.
Dixon, G.
Falkner, J.

Gayton, F. C. Gaze.
Gill, R. Gipps.

Hart, A. P. Hasleden, R. Hooker, C. Johnson, G. Kirsopp, T.

Langdon, J. W. Lewis, T. H. Lillies, H.

Lockwood, C. B. M'Kee, G. Mackrell, A. S.

Morse, E. Moullin, N. M. Paulley, J.

Plumbe. Prowse, A. S. W. Redmayne, R.

Redmayne, R. Steele, H. F. Sugden, D. A. Tait, E. S.

Taylor, W. C. E. Townshend, K.

Trevan. Webb.

West, E. de L. West, W. F. Wharry, A. J. Whitley, C. Wickham, W.

Woodward, F.

1876-77.

Barratt. Clark, A. N. Clarke, C. D.

Coles.
Cooke.
Dismore.
Dumbleton.

Gabriel. Griffiths.

Harbrook. Hayward. Hoekin.

Jackson. Jolliffe.

Krouk.
Langton.
Liddell.

Maude. Meade. Meadon.

Morgan.
Nall,
Nicholson.
Nicoll,

Oakley, A. Oakley, H.

Ogle.
Payne.
Pearless.
Prickett.
Pycock.

Richardson. Rowsall. Shears. Shephard.

Smith. Sylvester. Waldo.

Walters. Wells.

### PROCEEDINGS

OF

### THE ABERNETHIAN SOCIETY

FOR WINTER SESSION 1876-77.

### October 12, 1876.

Dr. Gee delivered the introductory address, which is here given in extenso.

This evening we celebrate the opening of the forty-fourth session of the Abernethian Society by the usual introductory address. On referring to Dr. Coomb's historical sketch (Hos. Reps. vol. iv.) of our Society, I find that the first introductory address was given by Sir James Paget in 1844. But no doubt many of you know that, although this Society has borne Abernethy's name since 1832, it was founded long before, by Abernethy, in 1795, under the name of the Medical and Philosophical Society of St. Bartholomew's. So that ours is one of the oldest scientific societies in London.

The most obvious purpose of a scientific society, I suppose, is the getting of truth: ours is a medical society, and our object is medical truth. Now it seems to me that medical societies may be of two kinds. First, there may be societies of men who are no longer students in the common sense of the word—men who know what is already known, and whose object is the winning of new truth out of the boundless world of the unknown. Next, there may be societies of men who are still students, commonly so called—men whose business is not so much to discover new truth as to make themselves master of the old.

The Abernethian Society, whatever it may formerly have been, is now of the second kind rather than the first; that is to

say, it consists in greater part of students, from whom we do not expect truths absolutely new, so much as truths which are relatively new—truths which are new to most of the hearers, or old truths arranged in a new fashion. The papers which are read here are almost always, and almost necessarily, of this kind. We are not ashamed here of old truths. We welcome the new, but, as I said before, we do not much expect them; for, in Milton's words, 'Our wings here are fledging; we may meditate a future flight, but our Pegasus soars as yet on feeble

pinions.'

Our wings, our Pegasus. I have hinted, before I meant it, at another, and indeed at the chief, use of our Society. Hereafter I will speak of this topic more at large, but let me say now, that if the Abernethian Society did nothing more than scatter a few truths abroad, it would have small reason to show for its existence. But ours is a dialectic society. We discuss the papers we read; we question, doubt, deny; we look at a reputed truth, whether new or old, from all points of view; we confront it with contrary and contradictory truths; and in doing so we strengthen the very spirit of truth itself. Under this discipline our wings grow strong, and our Pegasus comes to soar on pinions which carry him up to the very sun of truth. But more of this hereafter.

Let me resume the earlier part of my discourse relating to the papers we read and the specimens we show at our meetings. The profit of the papers read here is great, both to the reader and the hearers. A good paper collects truths from all times and all countries; but this is not all; greater still is the profit and the pleasure which we find in beginning or renewing an acquaintance with the great minds who have made medicine what it is. We do not read Hippocrates only for the sake of the isolated truths we learn from him. That were scarcely worth the pains. The mark of a book, written by a man of genius such as he, is that it cherishes our own spirit of truth; we seem to breathe the very air of truth; he inspires us; and as long as we feel his influence we are raised above our ordinary selves. I appeal to those who are listening to me whether this is not so. Our own love of truth vibrates in unison with the master's tones, and this power of awakening the slumbering faculties of men is the gift of genius. He is the genius, emphatically so called, who discovers the same faculty in his fellows. For what is genius? In the words of a member of our own profession, which I have been so bold as to adapt to the present occasion'For genius, bearing out of other worlds
New freights of thought from fresh-discovered mines,
Is but reciprocated love of truth.
Witness Hippocrates, our guardian angel;
Harvey, whose thought created man anew;
And Auenbrugger, poor neglected seer,
Who, like a moon, attracted naturally,
Kept circling round the central sun of truth.'

Let me then exhort you who read with the purpose of making ready a paper for this Society, above all things to choose out books of genius. You will have enough to read which (even if truth) cannot be called genius in the sense we have spoken of before. And such reading is not unprofitable in its way; but it must not shut out reading which is far more profitable. To give an instance of what I mean. It is very well to read the periodical journals of the day, and you will profit by the reading; but it would be a sad mistake to allow such reading, as it easily may, to leave us no time for looking up our Hippocrates, Sydenham, and Lænnec. It is the old strife between the letter and the spirit. A truth is good, but the truth is our chiefest good. To possess truth is good, it is much better to be

possessed by truth.

He, then, who would earn the name of a man learned in his art and mystery, must first of all ponder what Hippocrates has left us. Medicine begins with him. No doubt medicine has existed as long as man, and curious antiquarians find traces of it in the oldest records, Egyptian or Indian. We may compare medicine, as Celsus does, to finding food. Truly food and physic are the most immediate necessities of man. Nay, even the gorilla practises medicine, so we are told by Livingstone; but the science begins with Hippocrates. He laid its foundations deep and wide, deep and wide enough to last for ever. Of this there is proof in the remarkable fact that many men of all ages, even down to the present day, who have most deserved the name of good physicians, have taken the greatest interest in exploring the method which Hippocrates followed. For in all human knowledge the question of method must come first. The nature and scope of our understanding, the order of its operations, and the fundamental law which regulates them, these are surely worthy subjects of thought. Now the method of Hippocrates is not hard to discover. He is an empiric in the original sense of the word. In the books of Epidemics we see the first stage of his process. He collects the histories of as many patients as possible; and we may say that these histories are models of case-taking, and well worthy the study of those whose duty is to be good clinical clerks and registrars. The simple truthfulness

of the old Greek's notes is delightful. In the next stage he proceeds by what we now call logical induction from these particulars to universals, and the greater part of the other books of Hippocrates is made up of these universal propositions. But the word 'universal' has a relative meaning, admitting of less and more. Now in making universals more and more extensive, they become at last too abstract to be useful. It is here that Hippocrates shows his judgment. He is great in what Bacon calls middle propositions. I refer to that well-known passage in the 'Advancement of Learning' where he says, 'Plato, in his "Theætetus," noteth well that particulars are infinite, and the higher generalities give no sufficient direction; and that the pith of all sciences, which maketh the artsman differ from the inexpert, is in the middle propositions, which in every particular knowledge are taken from tradition and experience.' The middle propositions which Bacon speaks of are, in other words, universal propositions which have not ceased to be useful in particular cases. And I have somewhere met with a saying of Cabanis to this effect. 'Hippocrates shows that he is on his guard both against those hasty views which generalise from insufficient data, and also against that impotence of mind which is not able to perceive the relation between things, and so drags on

after particulars, without result, for ever.'

The result of this Hippocratic method is aphorisms, pithy sayings complete in themselves. The book of Prognostics and the book of Aphorisms consist entirely of such precise and independent propositions. And let me try to prove to you that the Hippocratic method is the true method in the words of Littré, the famous editor of Hippocrates, disciple of Comte and lexicographer. 'In all sciences the starting-point is the facts of experience. In some sciences the experimental basis is very small, and yet supports a superstructure of immense extent; such are the mathematics. But in proportion as we leave these sciences, which are almost pure, so increases the complication of the experimental conditions, and this complication becomes excessive in physiology, and in medicine which depends on it. It is in medicine especially that we have to guard against the drawingon of induction and the temptation to logic. The anticipations of reasoning are here most at fault; here it is that all the artifices which the human mind has devised for passing from the known to the unknown are of least avail; and, in one word, here it is that facts have most authority, and reasoning least, inasmuch as our science consists not in the infinite development of a few fundamental axioms, but in the more or less advanced co-ordination of innumerable particulars.' Those who have

gone through the process will agree with me that the deducing of true and useful aphorisms from a multitude of particular instances is no easy task. In fact, the last stage of the Hippocratic method is always in danger of being left unfulfilled by reason of the heap of facts which a man accumulates around him; mere baggage, impedimenta, or raw material of no worth whatever, unless it have passed through the workshop of the mind. We all become overloaded with notes of cases, burdening our drawers and pigeon-holes, and which we have not time enough to smelt, as it were, into useful metal.

And this intellectual smelting is a great toil. Sydenham has

told us what his treatise on Gout cost him.

'I send you a short tract upon gout and dropsy, instead of the thicker volume which, in my mind, I had determined on, namely, a history of such chronic diseases as my practice has most especially met with. By applying my mind, however, to its utmost, and bringing all my powers of thought to bear upon the subject, I incurred a fit of gout, such as I had never before suffered from; so that the fact itself warned me to lay aside, even against my own will, such lucubrations, and to take care of myself, well satisfied with having, in some measure, dealt with these two diseases. Whenever I returned to my studies the gout returned to me.'

''Mid the wreck of is and was,
Things incomplete and purposes betrayed
Make sadder transits o'er thought's optic glass
Than noblest objects utterly decayed.'

And here Hippocrates stops short. His method having provided him with useful aphorisms, he goes no further. He may arrange his aphorisms under sundry heads, those which relate to atiology, prognosis, or therapeutics; those which relate to diseases of the head or other parts; those which relate to this symptom or that, and so forth; but he is too wise to enter upon a third stage, and to construct a system. And what is system? It is an attempt to introduce the method which is opposed to that which has brought us so far safely; system is syllogistic and not inductive; it attempts to explain things, to show us the why and wherefore, to deduce facts from principles, particulars from universals; it tries to make knowledge look as if it approached perfection. If system delude us into the notion that it can give us aphorisms, or principles useful in practice, system is an evil which cannot be denounced too strongly.

The only use of system is to serve as an intellectual gymnastic; but even in this way, applied to so practical a knowledge as

medicine, it may be highly dangerous, through our mistaking

the phantoms of system for the truths of induction.

In sciences which are purely speculative, system may be carried to the highest degree; and a great delight it is to see how man's mind can create a speculative universe alongside of that which exists independently of us. Take Spinoza's ethics as an instance of what I mean. But between Spinoza's universe and the real world of things is a great gulf fixed, not bridged over, so far as I can see, in one single spot. And thus the danger of mistaking pure imagination for reality is less than when the propositions of syllogism and induction are mingled. And from this mingling the Hippocratic method is wholly free. It gives us inductions pure, detached, isolated—inexplicable they may be, but they are true. They relate to life and work. But system is mere intellectual sport—

'And tired with systems, each in its degree Substantial, and each crumbling in its turn, Let us build systems of our own, and smile At the fond work, demolished by a touch.'

Did time allow I should be greatly pleased to unfold this doctrine of the Hippocratic method yet more. I should like to examine the work on Ancient Medicine along with you, and to show how the polemics which Hippocrates directs against the dogmatists of his day might be revived against the dogmatists of our day, especially the chemists and physiologists. With the work on Airs, Waters, and Places for our text-book, we might discuss the topics of ætiology, hygienics, and prophylactics. The book on Prognostics and on Regimen in Acute Diseases would guide us in a search for the principles of therapeutics. These are some of the things which the father of physic will teach us, and I am glad to believe that ours is not more an Abernethian than a Hippocratic society.

Next to Hippocrates in respect to time comes Celsus. His merits are very different from those of Hippocrates. Celsus is not a genius; his work is so largely compiled from the writings of others, that some critics have thought that it is nothing but a compilation. But it is this very thing which makes Celsus' book so valuable as it is. He is supposed to have lived in the great Augustan age, four centuries at least after Hippocrates; and these were very busy centuries; in particular, the great Alexandrian school of medicine had flourished at that time. He refers to about eighty writers of medicine whose works are entirely lost; and, indeed if it were not for Celsus, we should out know how great had been the increase of medical knowledge

since the days of Hippocrates. Celsus is characterised strongly

by truthfulness, clearness, and good sense.

After Celsus it might be expected that I should say something concerning Galen, who lived in the reigns of the Antonines; but I confess I could never read him. It is all very well that he should write commentaries on Hippocrates, but he is far enough from possessing the Hippocratic spirit. He does not work by the Hippocratic method; he is almost more of a metaphysician

than a physician, and his prolixity is great.

Even Aretæus, much as he has been praised, and much as he deserves to be read, shows a falling away from the principles of the great master, the 'divine old man,' as Sydenham calls him. Aretæus does not give us the aphoristic truths which are the life of medicine, but he draws striking pictures of diseases somewhat idealised. He reminds us of Dante and Spenser more than of Hippocrates; however, his fragmentary book leaves our art a step farther on the road than Celsus.

Cælius Aurelianus is the only other ancient whom I can recommend as being worthy your study: if you can read him; for his book is written in a most barbarous style, and would, I think, puzzle a man who might have spent ten years in reading Cicero. And unluckily he has never been translated, as he well deserves to be. I confess I have dipped into him only here and

there, but I have found good things in him.

Paulus Ægineta's is a poor performance. However, it has been translated, and so is worth keeping on one's shelf as a monument of what medicine was about the time of the overthrow of the Western Empire.

You may think that I speak of a long course of reading; but, my friends, take courage; the next ten centuries will give you a

vacation of study.

'See Christians, Jews, one heavy sabbath keep, And all the Western world believe and sleep.'

But let us not be too hard even upon the dark ages. In the twelfth century a work was done which has had great results for us. The foundation of St. Bartholomew's indeed consisted at first, as you know, of two parts: one monastic, temporary, suitable perhaps to the time, but which (it was written in the book of fate) should not endure, and which died out, utterly corrupt, four centuries after the days of Rayer; the other part, medical, abiding, necessary to all ages, and which has gone from strength to strength, until it has become the great hospital and school of medicine in which we all feel the deep satisfaction which words are poor to express.

The first effect of the revival of learning in the fifteenth century seemed, so far as medicine was concerned, to be a kind of deification of the ancients. Hippocrates and Galen were supposed to be not less infallible than the Pope of Rome. A remarkable instance of the truth of what I say is found in the annals of the College of Physicians.

It stands thus in the annals :-

'December 22, 1559.—It has been notified to John Geynes, otherwise a man well behaved and not imprudent, that within one month he make known to the College in writing all those passages concerning which he was not ashamed to say in public and before the learned, and even in the presence of the whole College assembled in its usual committees, that Galen has erred.'

'1560.—Last year, in the month of December, John Geynes was commanded to bring forward all those passages concerning which he was wont publicly to say that Galen had erred, according to the testimony of that worthy man, Thomas Wendy, Physician to the Queen, and even of Geynes himself, openly saying so before the whole College. But when he had refused, the Sheriff of London, by order of the President of the College, com-

pelled him to hold forth or go to gaol.

'When, however, Geynes refused to defend his cause, and clearly perceived that he, and not Galen, was wrong, he honourably gave himself up, and acknowledged his fault; he lamented that he had propounded blunders, that he had not been more circumspect, that he had not pondered the passages of Galen more carefully, that he had not sought out Galen's meaning, that he had not understood Galen's opinion, that he had not quoted Galen's words faithfully, that he had not shown due respect to Galen, and had accused him falsely.

'Which he also confirmed by his subscription in the following words: "I, John Geynes, confess that Galen has not erred

in those things which I alleged against him."

This event is but a flicker in the socket of a dying taper: the days of Galen were numbered and finished. The kingdom was about to be taken from dogma and given to dialectics. Galen was soon to be weighed in the balances and found wanting.

William Harvey was born in 1578, or less than twenty years after Geynes' trial for heresy. The discovery of the circulation of the blood was a deadly wound to authority and Galen. The

Hippocratic spirit soon revived.

I have looked into a few of the most famous books on physic written at the end of the sixteenth and beginning of the seventeenth centuries, before Harvey's discovery, particularly into Fernelius, Mercurialis, and Ballonius, and I found that the new epoch had

not yet begun. The full influence of Harvey and free-thinking is not felt in medicine until we come to Thomas Sydenham, who was born in 1624. But I will briefly refer to two English physicians who were somewhat older than Sydenham, and whose writings are not yet forgotten. I mean Francis Glisson and Thomas Willis. Glisson was the discoverer of rickets; Willis discovered saccharine diabetes.

And here I hope you will pardon me if I indulge in a short digression suggested by the name of Willis. I wish to say a few words upon the manner in which we should read these old books. I think you will admit that it is a sound principle of interpretation which Fichte lays down in his sixth lecture on the Doctrine of Religion: 'So to understand these writers as if they had indeed wished to say something, and, so far as their words permitted, as if they had said what was right and true,—a principle which seems to agree with justice and fairness.' Let me illustrate

this principle by an example.

Willis talks much of the vital and animal spirits. I confess that at first these terms do not convey any idea. We feel disposed to pass them over with charitable pity for a man who had nothing more real to write about. Yet he would be a rash man who would dare to say that Willis and Sydenham were guilty of using words full of sound but signifying nothing. The Animal Spirits. First of the Spirits. The Latin spiritus, a word originally meaning breeze or breath, grew in comprehensiveness until at length spirit and energy of any kind came to be synonymous. The same is true of the corresponding Greek word pneuma, and also (so Spinoza tells us in the first chapter of his Theologico-Political Treatise) of the Hebrew word ruagh. Spirits then mean energy. And next of the qualification, Animal. In Galen's system, the animal constitution is defined to be that which is derived from the brain, through the nerves, to the organs of sense and motion. This is enough, the animal spirits signify the energies of the nervous system; and if in later times men have talked first of nervous fluid and then of nervous force, I doubt that they have not done much more than change the names of things. Again, the animal spirits are truly said to be formed from the vital spirits. By the vital constitution is meant the whole sanguifying and sanguineous system. Then the vital spirits are the energies and forces of the blood. The vital spirits became transformed into the animal spirits; or, in modern phrase, the energies of the nervous system are derived from the energies of the blood.

Now we who within the last forty years have become familiar with the speculations of Mayer, Joule, Grove, and others, respect-

ing the mutability and eternity of energy, will have no difficulty in confessing this doctrine, although most likely we may be at first

astonished to find it current three centuries ago.

Let these examples suffice. When we read old authors, we must be quite sure that we understand them before we judge them. The meaning of words is continually shifting, and we

must resist their tyranny.

In Sydenham, the Hippocratic spirit fairly arises above the horizon once more. The increase of medical knowledge in the last two centuries has been immense, oppressive. It sometimes provokes a feeling of the deepest sadness. Who is sufficient for these things? Our life is too short; scarcely do we begin to understand a little, scarcely do our powers of discerning and judging become ripened, than we go hence and are no more seen. And I gave my heart to know wisdom: but I perceived that this also is vexation of spirit. For in much wisdom is much grief; and he that increaseth knowledge, increaseth sorrow.'

Do you remember the famous story told of Antoine Arnauld, whose friend asked him whether he rested not sometimes. 'Rest!' he answered, 'have I not an eternity to rest in?' My friends, let us console ourselves with the thought that we

have an eternity to work in.

The strong desire which we feel to live for ever, our longing to become more and more like the Eternal, our conviction of aptitude for eternity, belie the appearances of death. This present life is our infancy, in which we make a few first steps; feeble steps perhaps, but woe to him who neglects his calling here! Can be who is faithless in these few things expect to be made ruler over the many things which we look forward to in a life to come? What must happen to those who fling away their birthright of opportunity, we do not know.

Sydenham's writings are of unequal value. The books he published last are by far the best. I will not go into details; I

will only say he marks a reformation in medicine.

After Sydenham's time we meet with no more books written in the old scholastic manner, like those of Glisson and Willis. And what we may call the Sydenhamian or revived Hippocratic

school flourished down to the end of the last century.

A contemporary of Sydenham was Richard Morton, who published three books of great worth shortly before his death at the end of the seventeenth century. One book on diseases accompanied by Atrophy, the other two are on Fevers. They are quite Hippocratic.

Richard Mead, William Heberden, George Baker, John Fothergill, Robert Whytt, Francis Home, William Withering, David Pitcairne, James Currie, Edward Jenner, these are the chief English names in medicine during the last century, and the same spirit pervades them all.

In Italy, Baglivi, Lancisi, Torti, and Borsieri; in France, Vieussens, Senac, and Bordeu, worked by the same method.

In Holland, Hermann Boerhaave appeared, a sort of modern Galen, bearing much the same relation to Sydenham that Galen did to Hippocrates, who wielded an authority during his lifetime not much less than that which so long belonged to Galen. They say that Boerhaave used to take off his hat when he spoke of Sydenham; but he was not a true disciple of Hippocrates or Sydenham. He invented a system of pathology which, like all our little systems, had its day; it had its day, and ceased to be. There was not in it life of truth enough to keep it sweet and sound, and few are those nowadays who read Boerhaave.

Boerhaave's praise is the men who were his pupils. First of all, Albert Haller. Next, Gerard van Swieten and Antony de Haen. These latter two men were persuaded by Maria Theresa to settle in Vienna, in order to revive the school of medicine there; and their scholar, Maximilian Stoll, was greater than either of his masters. And so the eighteenth century came to an end

But I have not yet spoken of the two men of that century who had the greatest influence upon medicine; John Baptist Morgagni and Leopold Auenbrugger. Hippocrates marks an epoch; so do Harvey and Sydenham; and also Morgagni and Auenbrugger. The year 1761 is a year much to be remembered in the history of medicine. In that year Morgagni, eighty years old, published his book on the seats and causes of diseases: this was the beginning of morbid anatomy. In that year Auenbrugger published his book on percussion of the chest: this was the beginning of the art of examining the deeply-seated organs during life. The only year which can compare in fame with 1761 is 1628, the year of Harvey's book.

The men of whom I henceforth have to speak lived under these new influences. I will mention the dead only. In our own country we celebrate Matthew Baillie, Robert Willan, John Blackall, William Charles Wells, Richard Bright, Thomas Addison, Thomas Hodgkin, Robert James Graves, John Abercrombie, Peter Mere Latham, Robert Gooch, and Marshall Hall. But the French school of medicine was the most famous of the first thirty or forty years of the present century. Corvisart, Bayle, above all Laennec, Broussais, Piorry, Bretonneau, Cruveilhier, Andral, Louis, Trousseau, Rilliet, and, last of all, although by no means the man whose fame will be the least,

Duchenne. The Germans have worked well at physiology and microscopical anatomy, but I will not shrink from declaring my opinion that to medicine they have added very much less than the English or the French. The discovery of the ophthalmoscope by Helmholtz, and of the laryngoscope by Czermak, is their greatest praise. For my own part, I do not rate German medical books very highly. It may be a fault or failing of mine; but, to speak plainly, they are not to my taste. Time was when I followed the example of the many, and supposed that the secret of science was in Germany. I read many of their books with an honest intent, but I came to see that, for the most part, they were pervaded by two faults. The first fault was that syllogistic spirit of system which has led many of their best writers to think out over their desk symptoms of disease and methods of treatment, which the spirit of truth at the bed-side will not acknowledge. The other fault was the endeavour to say all that can be said, forgetful that there is a proportion between facts as between everything else, and that some facts are of great value, and others of little or none at all. This is a very old defect of the Germans. Montaigne alludes to it when he says, 'The Germans drink almost indifferently of all wines and liquors with delight; their business is to pour down and not to taste.'

I have now finished my historical sketch. I have spoken much of books, and I have no fears that any one of my hearers will cry down book-learning. Study and experience in medicine are sometimes opposed to each other, especially by men who usurp the name of practical. Experience is indeed the source of knowledge in medicine; but experience alone is of small worth; it is merely unwrought material. A man may pass through life with a very large experience, and vet with very little increase of knowledge. Experience without study profiteth nothing. You see a patient, you examine him as carefully as possible, you note down the details of his case, you ponder it, you compare it with other cases which you have recorded; this is the only kind of experience which deserves the name. And can we suppose that these methods of studious thought will not be carried out best by him who bears the best models in his heart? Is not the experience of that man likely to be the best who is fresh from the inspiration of the great prophets of medi-Our book-learning will raise us common men above ourselves; we too shall see in part with the eyes of Hippocrates and Laennec. Let me take an instance of what I mean from another art. During the last great French-German war, Count von Moltke is said to have given it as his opinion that the

Algerian training of so many of the French generals was a bad training, because it led them to despise the rules drawn from the practice of the great masters of the art, and because it encouraged them in relying upon mere expedients of the hour. If this were the conduct of the French, they were condemned beforehand by a greater soldier than Von Moltke. Napoleon Buonaparte was talking with his generals one evening at Dahme, near Dresden, when the loss of the battle of Dennewitz by Ney caused the Emperor to speak of the difficulty of making successful war. Marshal St. Cyr declared that it was very doubtful whether the longest experience was indeed the best school for learning the art of war, and that of all the generals, French, Russian, Austrian, or Prussian, who had been at the head of the armies of Europe since the Revolution, not one, not even the Emperor himself, had gained by experience. And Buonaparte did not hesitate to confirm this remarkable opinion. He said that his first campaign in Italy was his masterpiece of war, and that he knew only one general who had profited by experience, and that was Turenne, whose great ability was the result of great study.

Let me now resume the topic at which I hinted in the beginning of my address. The Abernethian Society is a discussion society, and this is its chief use. For discussion is the great means of developing the spirit of truth which is within each one of us. Our faculty of discerning truth and falsehood underlies all logic, ratiocinative or inductive. Logic does but put in order the material which our faculty of truth is to judge. The simplest syllogism appeals to and presupposes this faculty. This is the essence of man, that which makes man man, that which distinguishes man from the beast. This is the dæmon of Socrates, the ruling part of Antoninus, and, if I may say so, it is the Word of God. The truth as distinguished from truths. is in us all, but in us all is more or less obscured by the mists of passion. And passion is desire—desire of reputation, riches, or pleasure. Truth and passion are contradictory; they are the good and evil deity of man. We must choose between them; we cannot serve two masters; and if with us our summum bonum be to attain the full development of our nature, that is to say, to attain to a substantial union with truth (according to that sublime prayer of Thomas à Kempis, 'O Veritas Deus, fac me unum tecum in caritate perpetua'), if this be our aim, then we reach it only by casting out the great adversary, passion, which strives to drag us down below our nature. In a society such as this, desire of reputation is the passion most likely to be felt, and a discussion society will help us to subjugate it. How far short soever we may fall of our ideal, we know that we ought to come to our meetings here saying in our hearts, 'My object is truth; to develop my own nature, and to help my brethren in developing theirs. The only reputation which I seek is that of being devoted to the truth. Men cannot praise the sharpness of my wits, and be it so; but in devotion to the service of my

proper nature I need be second to none.'

Gentlemen, such thoughts as these open up the whole field not only of knowledge but also of morals; indeed, from our present point of view, truth and goodness blend. But I must draw to an end by reminding many of you that the Abernethian Society will probably afford you the only opportunity which you will have in your life of cultivating your powers in the way I have spoken of, namely, by discussion. I invite you all to join it; I would even urge you all to join it, because I am confident that you will find it to be for your good. Your student-days here are few; soon you will have to go out into the world to do the truth which here you have learned, and it behoves you to have your sinews well knit, and your weapons well proven before you engage in the great warfare against falsehood and ignorance, evil and disease. In the name of Saint Bartholomew's Hospital I tell you that it is expected that every man of ours will do his duty.

### October 19.

Dr. Maberly showed an old form of pessary which had remained in the vagina for twenty-six years. The patient on applying for relief denied all knowledge of the presence of the foreign body, which was firmly impacted; removal was effected under chloroform by Dr. Godson.

The pessary was disc-shaped, and had to be split before

removal.

Mr. Keetley read a paper on 'Some Points in the Treatment of Fractures.'

### October 26.

Dr. Wharry showed a specimen of carcinoma of stomach.

Dr. Moore showed a specimen of gastric ulcer, with stricture of the pylorus, probably cancerous.

Dr Maberly showed a specimen of hypertrophied clitoris,

which had been removed by the écraseur.

Mr. Darbishire read a paper on 'The Treatment of Wounds.'

He pointed out the necessity of looking to the facts of the general behaviour of wounds in order to recognise a rational system of their treatment. By observation the surgeon learned that those wounds which were not exposed to the air, and from

which there was a free escape for all dead tissue, healed up most quickly and with least constitutional disturbance, therefore with less danger to the patient. He explained the constitutional disturbance by the early decomposition of the dead tissues, insisting that by the first chemical changes in the direction of decomposition, its most poisonous substances were formed. A free drainage was the most essential point in the treatment of a wound, for if that was intelligently arranged, then there was no need for antiseptics; the wound would keep healthy of itself.

As to the antiseptic method, it was of no use where a free drainage could be kept up from the wound; it might be of advantage when that was not the case, but only then. Every method or system of treatment was bad except the rational treatment which looked upon every wound as an individual to be treated (upon sound principles) according to its surroundings.

After a few words on the excellence of the practice of drainage as applied to wounds, the paper closed.

### November 2.

Dr. Wharry showed a specimen of malignant disease of the kidney, with the lungs and portions of the intestine from the same patient.

The interest of this case lay in the fact that the disease had lasted fourteen years, and in the absence of symptoms pointing to active mischief in the lungs or bowel.

Mr. Pye showed two specimens of abdominal aneurysm, and read the notes of the cases.

Mr. Benton read notes of another case of abdominal anenrysm.

Dr. Wharry read a paper on the 'Use of Sleep in the Treatment of Hospital Patients.' Three types of sleep were distinguished: the hyperæmic, anæmic, and toxæmic. Healthy sleep being due to slight degrees of cerebral anæmia, higher degrees produce insomnia, as in phthisis or delirium tremens. The characters and treatment of this form were pointed out. The use of stimulants on the one hand and narcotics on the other were condemned. Various means of producing sleep in patients whose insomnia is due to habit or mental excitement were discussed.

### November 9.

Mr. Thomas read notes of case of fracture of the skull with hyperpyrexia, treated with temporary relief by the cold bath.

Mr. Bruce Clarke showed a dissection of a Colles' fracture.
Mr. Benton read a paper on 'Nurses and Nursing.'

### November 16.

Mr. Pye showed a specimen of aneurysm of the arch of the aorta, with an aneurysmal dilatation of the arteria innominata; he also showed a specimen of internal strangulation of the small intestine, and read the notes of the case.

Mr. Griffiths read notes of a case of typhoid fever.

### November 23.

Mr. Gabb read the notes of a case of œsophageal obstruction, for which gastrotomy was performed by Mr. Callender.

Dr. Wharry then read a paper on 'The Treatment of Cases

in which Death appears Imminent.'

Sudden death.—It not rarely happens in cases of impending sudden death that there are a few moments in which something may be done with a hope of averting the calamity; if only one life in a thousand be thus preserved, it is sufficient reason for taking into consideration the treatment of sudden emergencies. Death seldom happens from syncope, asphyxia, or asthenia alone, and it is always necessary to form a just appreciation of the extent to which each of these factors is engaged in the fatal result.

Sudden death from aortic incompetence is by no means infrequent. When death does occur, it is almost instantaneous; the heart stops in an over-distended condition, and our only hope of averting death rests in rapid venesection. In rare instances death, depending upon asphyxia due to acute ædema of the lungs, has followed within an hour of paracentesis thoracis. Rapid withdrawal of the fluid from the pleural cavity causes an influx of blood to the pulmonary capillaries, and the blood being unable to obtain a sufficiently ready exit, acute ædema occurs, as evidenced by urgent dyspnæa, with albuminous expectoration, leading to death. Here again careful attention to the details of the operation is to be insisted upon. Evacuate the fluid slowly, always stopping temporarily when the patient coughs much. Carefully watch the pulse and administer brandy.

If death should threaten after a hemorrhage, the application of Esmarch's bandage to one or more of the limbs may possibly avert dissolution; but one must always guard against remov-

ing the bandage rapidly.

When death is threatening from coma, artificial respiration must be resorted to, and maintained with untiring perseverance so long as the heart is beating.

There are certain cases brought to the hospital by the police as drunk. They smell of spirits, and appear to be in

a condition resembling uramic rather than alcoholic coma. This condition is due to excess of alcohol, with absence of food and exposure to cold. As death sometimes occurs in this state, the treatment must be conducted with care. Wash the stomach out, then inject some warm eggs and milk; apply a large mustard poultice to the chest and warmth to the surface generally. Avoid cold douches, the galvanic battery, and emetics.

In all cases where death is imminent, any treatment adopted

should be resolutely carried out.

Mr. Bruce Clarke showed some microscopic specimens.

### November 30.

Mr. Bruce Clarke read a paper on 'Some Points in the Treatment of Gonorrhœa.'

After alluding to the common character of this disease, the author explained that his remarks would be limited to such cases as had come under his notice in the Surgery, together with

the treatment employed.

After briefly discussing the pathology of the disease, the indications for treatment were then laid down. Patients could be treated by diet alone, by local injection, by medicine, or by all three methods. The practical point to be solved, however, was how best to treat a fairly healthy patient, who either would not or could not lie up for a while.

The author was strongly in favour of the abortive treatment in the premonitory stage. For this abortive treatment he used an injection either of nitrate of silver, gr. v., or tannic acid, gr. iii., coupled with a few drops of the tincture of opium to

the ounce of water.

During the acute and subacute stages, especially the former, there was but little to be done except to avoid doing harm by strong injections. Nothing more was to be desired than keeping open the bowels and washing away the irritating discharge.

Once the gleety stage was ushered in, active treatment might again begin. The author spoke very highly of an injection of acetate of zinc, gr. iv., tincture of catechu, m. viii., tincture of

opium, m. viii. to the ounce of water.

The author stated his belief that the disease could be cut short in the premonitory stage or in the gleety; but at the acute period treatment to an active extent was only deleterious. The results of treatment in over seventy cases were laid before the Society.

After briefly alluding to the chronic character of many gleets, their relation to stricture, and the means to be taken for their cure, the author concluded by urging the use of opium as an adjunct to every injection.

### December 7.

Mr. Pye showed a specimen of gall stones, consisting of nearly pure crystalline cholesterine.

Dr. Shuter read a paper on 'Obscure Abdominal Injuries.'

He held that those cases in which death occurs shortly after blows upon the epigastrium may be explained in one of two Either there is paralysis of the heart, produced from the blows being communicated through the diaphragm, or there is so much injury done to the solar plexus, that the abdominal blood vessels become so dilated as to be capable of holding nearly all the blood, and that those patients die from anæmia of vital organs. By way of illustration he cited several cases that had come under his notice at St. Bartholomew's Hospital, besides the two cases recorded by Mr. George Pollock, and the one by Sir A. Cooper, where a man died on the spot, following a blow on the epigastrium. He then read notes of Mr. Willett's fatal case of ruptured bladder, and said he felt very strongly that in a case of the kind it was imperative to see it and make a diagnosis at once, and then immediately to open the abdomen and stitch the bladder up, the only positive sign being the capability of passing a sound into the abdomen far beyond the normal limits of the bladder. If the case was either not seen or not diagnosed for about two days, it was then too late to open the abdomen, for it would only make matters worse to do so when peritonitis had set in; but that the patient should be kept entirely at rest, and have a soft catheter open at the tip passed several times a day to prevent the bladder becoming distended. Out of fifty-one cases that are on record, only three have recovered, and only one case of these three (Mr. Chaldecot's) had extravasation into the peritoneal cavity.

He then discussed ruptured diaphragm, and gave an account of a case which lived two days, and in which the stomach and

transverse colon were found in the left pleural cavity.

After relating some cases of ruptured liver which had recovered, the rent being slight or subperitoneal, he recorded a case of a boy who lived four hours after being admitted to St. Bartholomew's Hospital with a ruptured stomach. The boy had the ordinary board-like hardness of the abdominal muscles, and complained of smarting in the abdomen after taking brandy.

Mr. Shuter showed how closely this case accorded with the symptoms of the one which Mr. Moore has placed on record.

The paper closed with a few suggestions in cases of ruptured intestines.

### December 14.

Dr. Wharry showed a specimen of malignant disease of the bladder.

Mr. Adams read a paper on the 'Clinical Value of Alcohol.'

A brief account of the physiological action of alcohol was given, reference being made to Dr. Brunton's paper for a fuller discussion of the subject. Its use in collapse from injury, and in capillary bronchitis, and in allied diseases of children, was insisted on, while it was explained that its use in such cases was at least in part due to its preventing the necessity of the oxygenation of the blood. The use of alcohol in the pneumonia of adults and in post-partum hemorrhage was then discussed. In pyæmia and septic diseases its use was explained from the results of physiological experiments on animals. The indications for its employment in typhoid and other continued fevers were given.

The uses of alcohol having been summed up, the subject of its abuse was entered into. To show that alcohol was not necessary for sustained exertion during health, Dr. Parkes' essay on the spirit ration in the Ashantee expedition was quoted, as also the experiences of the recent Arctic expedition, and Dr. Fothergill's writings. The loose and indiscriminate way in which alcoholic liquors are sometimes ordered by medical men was strongly condemned. Whisky was stated to be not so harmless a form of alcohol as is generally believed, on account of the frequency with which it contains fusel oil. The various merits and demerits of brandy, gin, rum, and absinthe were mentioned.

Total and sudden abstension from alcohol was held to be a perfectly safe procedure for habitual drinkers. The question of State regulation of the liquor traffic was then discussed. And in conclusion the importance of the subject, and the power for good or evil which the employment of alcohol placed in the hands of the medical profession, was urged on the notice of the Society.

### January 11.

Dr. Brunton read a paper on 'Dyspepsia.'

He began by saying that the enjoyments of the incidents of life depended upon the judicious distribution of labour, rest, and relaxation; but when the relation between these becomes disturbed, life becomes filled with pain instead of pleasure. So with the stomach and its functions, if the supply of food is regular in

quantity and good in quality, and the energy of the system is not interfered with in carrying out digestion, eating becomes a pleasure and digestion is no labour, but if anything prevents the just apportionment of these matters, nausea is felt instead of hunger, and comfort after a meal gives place to pain; in other words, we have dyspepsia. He then gave a short sketch of the growth of our knowledge of digestion; how the ancients thought that the food taken into the stomach was simply dissolved by moisture and warmth; how, later on, a kind of putrefaction was supposed to take place, or that the food was ground into pieces by the movements of the muscular walls of the stomach, like in the gizzard of a bird. It was not till 1840 that the digestion of food was finally attributed to the action of pepsin and the presence of hydrochloric acid. We owe a great deal of our knowledge of digestion to the observations of Dr. Beaumont on the Canadian, St. Martin, who had a gastric fistula. describing several of these observations, the writer discussed the causes of the feeling of hunger, which he attributed, first, to a certain condition of the capillaries and lymphatics; secondly, to a condition of the system requiring for its relief absorption of food into the blood. He then touched upon the diagnostic value of the state of the tongue; first, the tongue with a thin white fur, going with a good appetite, and, in St. Martin's case, accompanied by excoriations on the mucous membrane of the stomach; secondly, the tongue with a yellowish fur, going with loss of appetite and deep red patches in the stomach; thirdly, the coated tongue, with no appetite and pustules on the gastric walls.

The writer then considered the causes of dyspepsia, the irritations of the stomach being divided into those caused by excessive quantity and by improper quality of food. A mild attack required a limited, bland regimen only; chronic dyspepsia is generally caused by a persistence of the causes of an acute attack, the best treatment being that by bicarbonate of soda combined with a vegetable bitter; atonic dyspepsia is due to a debility of the circulation and nerve apparatus, and must thus be treated, strychnine being a most useful drug for fulfilling this

indication.

### January 25.

Mr. Macready showed a dissection of a fracture in the neighbourhood of the ankle-joint with dislocation.

Dr. Verco read a paper on 'Delirium.'

Introduction.—One of the reasons that leads me to bring this subject before this honourable Society is, that it is one on which I have not been able to find anything like a full article in any

of our medical text-books. True, one can cull not a little information respecting the matter in the shape of scattered fragments; but it is necessary to gather up these fragments if nothing is to be lost, and work them into a united whole. And this will not be found by any means useless for practical

purposes.

It may be suggested that delirium is but a symptom, and not a disease, and that hence it was not to be expected that it should form the subject of any very elaborate treatise. But let it be remembered that what we as practitioners want, is not only to know the symptoms corresponding to a disease, but what are the diseases corresponding to a symptom. Patients always come to us complaining of a symptom, never of a disease; and, as physicians, we have from symptoms to discover their disease. To do this, one must know what are the chief diseases that can cause it, and from among these to choose out that one which is compatible with whatever other symptoms we may discover. Hence it is well to consider the symptoms of disease, each one separately, and to group around it the complaints which may be its cause.

Causes.—Delirium is but a symptom, nevertheless it has a very great many causes. There are many predisposing circumstances, which of themselves would never produce it, but yet bring about such a condition of system that delirium is more liable to occur.

And first of age: we all know how much more readily it arises in the young; how a child will be raving day and night with an attack of pneumonia that in an adult would cause no more than a little nocturnal wandering; and how at the onset of scarlet-fever the headache of the man is equivalent to smart delirium in the child. This is attributed to greater nervous impressibility, just as infantile predisposition to whooping-cough and other such affections is explained. We all recognise the greater liability, and as a consequence deem the delirium of children as not nearly so unfavourable, from the point of prognosis, as that of adults.

Sex, too, is not without influence. We expect to find the female, from her greater nervous impressibility, more prone to delirium. The hysterical form, which I think we might recog-

nise almost as a distinct variety, occurs in women only.

Social condition, on the same ground, is alleged to act in a similar way. The higher classes are more liable to delirium than the lower. Their nervous system, being more highly developed and of more delicate organisation, has its equilibrium more easily disturbed.

Nervous tendency, too, may be enumerated, from whatever cause arising. Hence those unfortunates who have a neurotic taint hereditarily, whose ancestors were insane, epileptic, hysteric, neuralgic, &c., as well as those whose nervous systems have been damaged by cerebral injury, if they drink what to others would be a moderate draught become delirious madmen. So also pneumonia or other disease in a man whose nervous system has been undermined by alcoholic excess, is generally attended by violent delirium.

Diurnal influence.—Who has not noticed how a patient comparatively, if not completely, quiet all the day, grows restless towards evening, and all night long is incessantly delirious, yet falls into a quiet sleep as the morning dawns again? What is the cause of this? Is it connected with the removal of the curbing influence of the sights and sounds of day? Is it the nightly rise of temperature found in health and exaggerated in disease? What is the mysterious cause?

The exciting causes may be grouped under five heads.

1. Anæmia.—Thus in all the chronic wasting diseases, such as cancer of the stomach or elsewhere, we find that towards the end, as the patient's strength gradually diminishes, so he becomes subject to delirium. In those cases where the anæmia comes on very gradually, and the weakness of body proceeds pari passu, we usually find that the affection assumes the lan-

guid, low, muttering prostrate form.

In albuminuria, again, delirium is by no means uncommon; and when we remember the excessive pallor of the patient, and the great drain of albumen from his system, we cannot but attribute the mental derangement in great part to the anæmia. In this disease it may appear in various forms; it may gradually develop, as dimness of vision comes on, as a muttering wandering, or signs just like those of delirium tremens from alcoholism may arise; or the patient may have a series of uræmic fits; be comatose for hours, to awake a restless, speechless madman, to recover within a few days all his powers, but with the memory of those days completely blotted out.

After many acute diseases, such as pneumonia, a patient who has done well, and is seemingly out of danger, may suddenly become delirious. This is the 'delirium of collapse,' apparently due to cerebral anæmia, from palsy of the heart, and is very fatal in hemorrhages, profuse losses of blood from the lungs, or in fact from any other part. These are the best of all instances of delirium from anæmia, because no other causes co-exist. Thus I have known a man quietly asleep burst a bloodvessel in his lungs, and within five minutes be a raving satyr, obliged to

be held down by two or three attendants, and, strangely enough, within half an hour he was as sensible and conscious as ever, doubtless from restoration of his cerebral circulation.

2. A second cause is hyperæmia. We have a pure, uncomplicated instance of this, at least we are told so, in the delirium of the Bacchanalian dancers, where the cerebral circulation is excited by excessive muscular exertion. But it can scarcely be doubted that in these instances it was exercise mingled with wine.

Still we see the effect of hyperæmia in the delirium of cerebral congestion, from whatever cause arising, most markedly in meningitis, encephalitis, and any other intra-cranial inflammations. The delirium which is so common when there is embarrassed flow out of and consequently into the right heart, leading to passive congestion of the brain, ought rather to be attributed to cerebral anæmia, inasmuch as the aerated blood enters the brain in much diminished amount, and so disturbs the function of the brain.

3. A third cause is toxaemia, the circulation of poisonous materials through the brain. This is doubtless in part also the explanation of its occurrence in albuminuria, when there is a collection of effete matters in the blood in the onset of the acute specific infectious fevers, in poisoning by many drugs, as belladonna, &c., in acute alcoholism, and delirium tremens.

4. A fourth cause is what might be called *pyræmia*, commonly known as hyperpyrexia, the circulation of high-temperature blood. This, however, is almost always connected with a rapid action of the heart, and hence with cerebral hyperæmia, so that

few or no cases of pure pyræmia can be quoted.

5. A last cause may be given as nervous shock. This is an alleged cause. But though a very wide term, the only case I have seen which could bear this explanation was that of a woman, otherwise healthy, but extremely nervous or hysterical, who, on being refused permission to see her daughter, who was ill, became after a manner delirious, and was evidently quite irresponsible for her words and deeds, wrote a petition to the Home Secretary, &c. Doubtless this is the cause of many cases of insane delirium.

Varieties.—As one might expect in an affection of the mental processes, there are several varieties of delirium. It is very questionable, however, whether some of the names applied mark out distinct kinds, and not merely degrees.

1. There is the low muttering delirium, which describes itself, and which, occuring in fever, has had conferred on it the name

of febris nervosa stupida.

It would seem generally to be found where there is great weakness and prostration, as in advanced typhoid, &c., or where

there is only a feeble excitement, or disturbance of the equi-

librium of the nerve elements of the brain.

2. There is delirium ferox, where the patient is raving, noisy, and violent, requiring restraint. It would seem to arise in consequence of considerable nervous disturbance in a vigorous subject; but it is found even in the weak, when the disturbance is very great. When it is chiefly expressed in words, we have the febris nervosa versatilis, but to show how closely connected is this variety with the last, we have only to state that the muttering delirium may occur in the day, and the noisy garrulous form in the night, in

the same patient.

3. There is delirium tremens, where the mental derangement is accompanied by trembling of the limbs. It is almost always the result of hard drinking. The delirium is generally suspicious, quiet, busy, and attended with horrible hallucinations. It must be remembered, however, that in alcoholic delirium there may be no trembling whatever, and that a trembling delirium not to be distinguished from the alcoholic may occur in other diseases. It is said to have been observed in typhus; and I have witnessed the same occurring in chronic albuminuria; the patient having been in Hospital some months, so that it could not be attributed to alcoholic excess.

4. There is traumatic delirium, coming on after the receipt of an injury, and manifesting itself under several forms. As usually interpreted, it seems to be nothing else than delirium occurring

in and due to the surgical fever set up by the wound.

5. Then there is delirium exaggerans. This is a well-recognised form. In which a person has the highest notions with the smallest capabilities. He imagines himself the begetter of myriads while as impotent as a eunuch, fancies himself a very Hercules though he cannot rise from his bed, and bestows worlds upon his friends when he has not a penny to bless himself with. This curious variety is said to be found in general paralysis, in disseminated sclerosis of the brain and cord, and to be a frequent sign of commencing insanity.

Pathology.—If you ask me for a definition of delirium, I cannot give one, at least one that would include everything that is and exclude everything that is not delirium. The etymology of the word could be furnished; but that falls far short of the meaning of the thing. And if a definition is so difficult; how much more so a description of its pathology. Still we can inquire

somewhat into its relations and physical concomitants.

In delirium we find several factors, each of which helps to make up the whole, but each of which alone might not by some be considered entitled to the full name 'delirium.' First, We may observe that there is faulty perception. Thus a patient may tell you that the tinware of the ward seems to him like a shoal of fish, or he may mistake one of his nurses for his own wife, or fancy that the blood gushing from his own nostrils is pouring from the wounds of his next bedfellow. Here there is an impression on his organ of sense, but his perceptive centre is at fault. This is an illusion.

Again he may be in total darkness, unable to see any adjacent object, and yet from his words one learns that he sees himself surrounded by numerous persons and things, and sees all with the greatest vividness. Yet are they all unwelcome creatures of his imagination. Here there is no irritation of his perceptive centre through an organ of sense, but something is irritating his perceptive centre and producing in it the same condition that would have resulted from a sensory impression on it. There is perception without any external object to cause it, an hallucination.

Thirdly, You will find a patient who sees the tinware as though it were fish; he has an illusion, but yet knows that it is tinware, and can correct the erroneous perception by the other senses—by memory, or by reason. This patient has no delusion. If he believed firmly that he saw fish, and could not correct his

illusion, we should say he had delusion as well.

Again, we find patients who have illusions which operate upon their minds, but we know nothing about them unless we institute special inquiries with the patient. Then we learn that there is a sort of dreamy disturbance of the thoughts only. This is the first stage of delirium, that which often occurs in commencing cerebral congestion from heart disease, in the fever of common colds, &c.; hence we inquire of the patient whether

he is much troubled by dreams.

In the next stage we find the patient growing talkative, and the garrulity may vary from an occasional whisper during sleep up to uninterrupted and noisy utterances. Here a very much more profound effect is produced. And, lastly, we find the locomotory apparatus involved; from a little jactitation and restlessness, where the patient rolls in his bed, up to the condition in which he leaps out like a madman, and flies through the ward as for his life. In delirium tremens especially we find this very common. The poor wretch cannot be kept in bed. No sooner is the back of the attendant turned, not that he even waits for that, than he is up pacing his room, pulling about his bedlinen, building his bed in every corner, only to pull it down and pile it up elsewhere. I have seen it just the same after albuminuric fits. Here too we ought to place the picking of the

bed-clothes, so commonly seen, and dignified with the double

name of carphology and floccitatio.

There would seem, in fact, to be a sort of delirium agens; not one that must think or that must talk, but must do. Thus you will find two persons, of about equal strength, one of whom gabbles incessantly, while the other cannot be restrained from being up and about, but says not one word, even though you seize him and force him down on his bed. It seems almost like a distinct variety. It may be due simply to a peculiarity in the disposition of the patient, but it does seem to exist.

Here let me suggest that dreaming is a mild form of delirium, from which it cannot otherwise be distinguished than by its mildness. Natural sleep in a perfectly healthy body is sleep undisturbed by dreams. Were our systems just as they should be, we should not dream. You will notice that exactly the same circumstances that predispose to dreams predispose to delirium. They are more common in children, in the higher classes, in the

nervous.

Moreover, we all know that before the advent of the easily

recognised delirium come dreams, as in heart disease.

Yet, again, they are indistinguishable. Stand by the bedside of a child, hear it talking in the night; is it dreaming, or is it delirious? Both.

Dreams, too, are most vivid, most rapid, most persistent, when we are out of health or physically disturbed. The proverbial mince-pie for supper is a fruitful source through causing gastric disturbance. The headache from any cause arising, points to the truth that all dreams are due to physical derangement, and are but a milder type of delirium.

Lastly, see how alike are the manifestations. They are the

same illusions.

It would seem now as if in delirium there were two derangements:—

A perversion of the perceptive faculty.
 An excitement of the reasoning faculty.

Thus, in order that an impression from one object should cause the perception of another, as in illusion, or in order that, with no impression from an object at all, there should be the perception of it, there must be a perversion of the perceptive centre, and the second must be an aggravated form of the first. Now for the proper action of the perceptive centre we find a certain state of the centre essential; if that state is altered, its action will be deranged. This normal state depends upon its nutrition, and this, of course, almost solely upon the blood. A

certain amount of blood, a certain quality of blood, a certain heat of blood.

Now it is to be noticed that this centre has a certain stability, consequently so long as the blood supply does not alter very greatly from the normal, the function of the centre is not deranged. If, however, there is a sudden variation to any great degree, then there is perversion. Thus I have already referred to the case in which a man sleeping quietly burst a blood vessel, and almost immediately began to rave in delirium; there was a sudden upset in the cerebral circulation, which the centre could not withstand. When, however, the blood current was again equalised, and this took place in about half an hour, then the stability of the centre was such, that the normal powers of perception completely returned, though the circulation still must have been somewhat deranged. This stability seems to increase with advancing years; hence we find that a very slight variation in the blood current of children is sufficient to produce derangement of their mental faculties.

It would seem, too, that these centres have a very great power of accommodating themselves to alterations in the condition of the blood, provided that this alteration comes on slowly, and so allows time for the accommodation to take place. Thus I have seen patients far more anæmic than the one above quoted without any delirium at all. It was the sudden disturbance in the nutritive supply which caused so rapid and sudden an effect. But there is a limit to this accommodation of the centre to changes in its blood supply; hence when these changes become very profound, however slowly brought about, the power of accommodation can no longer keep pace with the change, and the patient grows delirious, as in wasting diseases like cancer, &c. This perversion, we have seen, can be brought about by alteration either in the quantity of the blood (anæmia or hyperæmia), or in the quality of the blood (toxemia), in the condition of the blood (pyræmia), and lastly by direct irritation of the centre itself, as in nervous shock.

But this perversion is not all. A man may fancy he sees one thing when he sees another, and yet not be accounted delirious. There is a second derangement, an excitement of the reasoning, thinking faculty.

Hence we find that when the patient is asleep, and when therefore all his mental faculties ought to be slumbering, he is mentally awake; he is thinking, he is living an imaginary life, and often at such a rate as would be actually an impossibility. His emotions are so strong that they burst forth in laughter or in tears, or in excited gestures. All this shows an intense irrita-

tion of his thinking centres, and as a matter of fact are accompanied by an abundant excretion of the products of their disintegration.

These two may be combined together in any proportions, though as a rule they vary equally the one with the other. Where there is much perversion of perception there is generally

much excitement, though this is not always the case.

Now as to the cause of the difference between the low muttering delirium and the fierce boisterous kind. The former variety seems to be due either (a) to great prostration of the patient's strength, or (b) to but slight irritation of the centres; the excited form (a) to moderate irritation in a vigorous subject, or (b) to intense irritation of the centres. That it is rather, however, dependent upon the intensity of the irritation than upon the patient's strength, is shown by the fact that a low muttering delirium in the day will become a noisy boisterous delirium at night, whilst the patient's strength cannot have proportionately increased in the meantime.

Before concluding the pathology I would make one suggestion. A patient came in with hæmoptysis, and while he was bringing up blood in large amount, he had an epileptiform fit, and was well again in a few minutes. The next day he brought up a second large quantity, had a second fit, and recovered from it in a few minutes. He had no delirium at the time, and very little afterwards. He never had had a fit before. Might we not suppose that this fit was the equivalent of the other man's delirium; that in the one case the man's psychical centres were thrown out of their stable condition, and in the other the man's motorial centres? The case of an albuminuriac may be put by the side of this. A man had uræmic fits for twelve hours, then coma for thirty-six, then delirium, in which he did not speak a word, but was ever out of bed. If the fits were due to ædema of the motorial centres, might not the delirium subsequent to it have been due to an cedema of the psychical centres, and of that part nearest to his motorial, and hence his peripatetic proclivities, and hence might not the delirium be the neurotic equivalent of the fits?

If so, is insanity the analogue of total chorea, and monomania

of hemichorea, or of chorea localised in one set of muscles.

Treatment.-In the treatment of delirium the best results will

follow prescriptions according to causal indications.

Thus, if it be due to anæmia, lowering measures are inadmissible. On the contrary, one gives nutritious nitrogenous diet in the wasting diseases, either by the mouth if it can be taken, or by the rectum if it cannot. Often, too, as in the wandering albuminuriac, a good dose of brandy, one or two ounces, given in the evening, will quiet the nervous system, and procure a night's sleep. So in the delirium of collapse, one administers carbonate of ammonia in five-grain doses, and tincture of opium in m. v. doses every four hours, the laudanum in these small quantities acting rather as a stimulant than as a sedative.

If it be hyperæmia, then the treatment must be the very opposite, with a view to diminish the amount of blood in the brain. Here one shaves the head, if the disease be inflammatory, and applies to the scalp evaporating lotions or the ice-bag. A good stiff purge, too, by causing derivative action to the intestines, and drawing off a quantity of fluid from the blood through the bowels, considerably lessens the intra-cranial pressure. This will not infrequently relieve in the same way the delirium due to embarrassed right heart, by diminishing the amount of blood

to be passed round the system.

When it is toxemic the treatment is not so satisfactory. The indication is to remove the poisonous material from the system; but this is generally almost if not quite impossible. For in chronic disease such as nephritis, or jaundice, &c., the poison has been increasing in spite of all our long-continued efforts to eliminate it. When, therefore, it has become so great in amount as to upset the mind, it is not to be supposed that by any measures, however heroic, we shall be able to get rid of it, directly the delirium points strongly to that course. We may use diuretics, diaphoretics, and purgatives, but they will be of but little avail, and are but a forlorn hope.

When, however, they are in excess in the blood because they have been taken as poisons through the stomach, or have accumulated rather from excessive formation in acute diseases, as typhus or typhoid, than from deficient excretion, then we may set the different emunctories to work with some advantage and some hope of success. To enumerate the different drugs would

be tedious.

If the cause be pyræmia, we have a fairly efficient remedy in the cold bath or in cold packing. Perhaps it would be no easy matter to bathe delirious patients, nor have I had any experience in bathing them. But those who have used this remedy for high temperature simply cannot but have noticed how drowsy the patient becomes after a bath, who before was wakeful and restless. Hence one would presume that its effect would be sedative upon a delirious patient and beneficial.

Next as to indications from the symptoms manifested.

Since there is evidently considerable cerebral excitement, rational treatment would consist in the exhibition of sedatives.

Thus full doses of opium or morphia may be given. This, however, is inadmissible in many cases, as in albuminuria, whether it exist as the primary disease, or only as a complication of the causative disease, be this typhoid, erysipelas, an injury, or aught else. So also in children, one would hesitate to give controlling doses lest the effect should be rather greater than was intended. A far safer remedy is the hydrate of chloral, which can be given in twenty, or even forty grains, and repeated if required. This would be preferable in those cases where there is cerebral hyperæmia, as it is supposed to act by producing anæmia of the brain; but it will act even in anæmic delirium. Bromide of potassium is also recommended, but I have no experience of its use here. Maybe it would be efficient in the milder cases and in children. Chloroform by inhalation I have never seen administered for delirium; sometimes, it is said, the patient is worse after he recovers from its effect than he was before, and in severe disease it would be rather a dangerous remedy.

When the delirium is exceedingly violent, it is advised to give with the nervous sedative a cardiac depressant as well, such as antimony or digitalis. Moreover, the antimony is said to be preferable when there is structural disease of the kidney, as it acts rather upon the skin, and digitalis when there is no kidney mischief, as it is a powerful diuretic. And here one might mention that digitalis alone is used by some practitioners in the treatment of delirium tremens, not in the usual doses of m. xv. or m. xx., but in single exhibitions of half an ounce of the tincture, a second dose to be taken in four hours' time of half an ounce. But I have no experience at all of antimony or digitalis in delirium

ferox, nor of digitalis thus boldly given.

By one or other of these remedies we may generally succeed in quieting the most boisterous patient. All that we require to know is, that with them we can quiet *any* patient if we like to push them far enough; and, finally, that it is not by any means necessary to *try* and quiet every patient's delirium.

# February 1.

Mr. Darbishire showed a working model of a form of anterior leg-splint.

Dr. Hart showed two specimens; the first, a liver ruptured through external violence; the second, an aneurysm of the aorta,

in which the wall of the sac was composed largely of connective tissue, and greatly compressed the lung.

Mr. Weiss then showed a patient convalescing from an attack

of traumatic tetanus.

A series of cases of tetanus occurring in the wards of the Hospital was then read by Mr. Weiss and Mr. Pye, and the latter showed some microscopic sections of spinal cord and sciatic nerve from a case of traumatic tetanus.<sup>1</sup>

On the motion of Dr. Wharry, the discussion was adjourned till

the following meeting.

# February 8.

Dr. Maberly showed a feetus at full term, delivered after craniotomy had been performed, the mother suffering from cancer of the uterus. Turning was effected before delivery.

The adjourned discussion on tetanus was concluded.

# February 18.

Mr. Pye showed a woman suffering from lupus exedens, in whom a considerable portion of the face had been destroyed.

Mr. Walsham read a paper on 'Palpation by the Rectum.' He

treated the subject under five headings—

1. The size of the hand that could be safely introduced.

2. Method of introduction.

3. The distance the hand could be passed.

4. The structures that could be recognised in the healthy state of the parts.

5. Diseases in which palpation was of service.

6. Conclusions.

After briefly discussing the first four points, for fuller details of which he referred to his paper in the reports of the preceding year,<sup>2</sup> and to a short article which he had contributed to Mr. Holden's 'Landmarks,' Mr. Walsham passed on to consider the fifth heading, *i.e.*, diseases in which palpation by the rectum was of service. He stated that first and pre-eminently it was useful in the diagnosis of doubtful affections of the pelvic organs, of the uterus, ovaries, bladder, and ovarian ligaments. He referred particularly to its use in estimating the condition of the pedicle in ovarian tumours, and related a case in which, in the dead body, he distinctly determined the peritoneal connections of a small ovarian cyst.

<sup>&</sup>lt;sup>1</sup> The specimens were from a case of traumatic tetanus under the care of Mr. Langton, and in which the sciatic nerve was stretched.
<sup>2</sup> Vide St. Bartholomew's Hospital Reports for 1876, vol. xii. p. 223.

It permitted the ready removal of foreign bodies from the rectum and the performance of operations on fistula high up; it was also useful in diagnosing strictures, especially those in the upper part of the rectum, and lower part of the sigmoid flexure.

It was of aid in the diagnosis of aneurysm of the abdominal and pelvic arteries, and in distinguishing between aneurysm of the

pelvic arteries and cancer of the pelvic bones.

It was especially valuable in determining whether in gluteal aneurysm the sac encroaches upon the pelvis through the great sciatic foramen, so as to involve the pelvic portion of the vessel.

It was of great service in the diagnosis of obturator and ischiatic herniæ, as the obturator foramen and ischiatic notch could be thoroughly explored by the hand in the rectum. It was also of use in the diagnosis of abdominal tumours and stone in the kidney.

Mr. Walsham also suggested that benefits were likely to be derived from the adoption of this method of examination in obstetric practice, and finished his remarks by stating the con-

clusions he had drawn from his present experience.

### March I.

Mr. Macready showed a specimen of ruptured spleen in which considerable local repair had taken place,

Dr. Maberly read a paper on 'Placenta Prævia.'

He urged the importance of the proper understanding of placenta prævia and its treatment, since the disastrous consequences which frequently follow can be very considerably controlled by appropriate measures.

He contrasted the two methods of treatment now in practice, viz., that by turning and rapid emptying of the uterus, and that by separation of the placenta from the uterine wall, and dilatation of the os as recommended and practised by Dr. Barnes.

He cited two cases which had occurred recently in the outpatient practice of the Hospital in which each method had been

used.

In the first case there had been considerable hemorrhage for at least six hours before his arrival, which was attributed to a fall some little time previously; but the patient was not in an exhausted condition.

The os would only admit one finger, and the placenta was felt just within and to the left side, with the head of the child beyond.

There had been no uterine contractions, and the patient was about a fortnight from her full time.

Under chloroform he separated the placenta as far as the finger would reach, performed bipolar version, and then ruptured the membranes.

The os uteri was very rigid, but by steady pressure of the fingers in the form of a cone, dilatation was effected, and delivery accomplished after some difficulty, the child being born dead.

The patient was in an alarming state of collapse, and was with great difficulty restored by stimulants and other means. She ultimately, however, made a good recovery, and was convalescent in a month.

The second case was one in which hemorrhage occurred two days after a fall, to the amount of about half a pint, in a healthy multiparous woman. He was sent for in consequence, and found hemorrhage going on, and without uterine contractions.

Os uteri was small and rigid, with the placenta attached to the left side and protruding through it; beyond was the head of the child.

He separated the placenta as far up as possible, ruptured the membranes, and gave f. 3ij. of extract of ergot, placing a binder tightly on the abdomen.

Uterine contractions were thus set up, and the os began to dilate. There was only slight hemorrhage after this, which ceased on again separating the placenta and stimulating the uterus to further contraction.

Labour went on steadily without further hemorrhage, but was retarded by the large size of the head. The child was still-born.

The placenta came away of its own accord, and the uterus contracted readily.

The author then endeavoured to show that the cessation of hemorrhage was due in all cases of placenta prævia to uterine contractions, which ought to be rapidly set up by artificial means.

This was to be done by endeavouring to dilate the os uteri, rupturing the membranes, and giving ergot.

The dilatation was accelerated by separating the placenta from the uterus with the finger, which thus accomplished in a moment what the unaided efforts of the uterus would take many hours to do. This separation must take place sufficiently far up to admit the presenting part, which, if it be the head, aids in arresting hemorrhage by acting as a firm plug through the medium of the placenta.

In contrasting the treatment and the results of these two cases the following rules were recommended, according to the

kind of case with which one had to deal, and which he divided into two classes-

I. Those in which hemorrhage was not so alarming as to call

for immediate delivery.

II. Those in which rapid delivery is necessary from the severity of the hemorrhage, and from the exhaustion occasioned by it.

In the first class, endeavour to bring about uterine contrac-

tions by-

 Separating the placenta from the uterus, and enlarging the os with the finger.

2. Rupturing the membranes.

3. Giving ergot.

4. Effecting dilatation by the fingers, or by the use of dilating-bags if necessary.

5. Applying an abdominal bandage to aid in retaining the

head of the child at the os uteri.

In the second class, version and rapid delivery.

There were, however, a small number of cases in which the os is so rigid as to defy any of these means of dilatation, and here, where the hemorrhage is excessive, you must plug the vagina tightly, and endeavour to support the patient's strength,

leaving the labour to take its own course.

One of the great advantages of the first method is that chloroform is not necessary, but it must be given in nearly all cases of turning, and whilst delaying treatment during its administration, produces also great depression, and from the vomiting so frequently caused prevents restoratives being retained by the stomach in case of collapse.

### March 8.

Mr. Clubbe and Dr. Verco were appointed to audit the

accounts of the Society.

Dr. Champneys showed a female infant suffering from ectopia vesicæ, who presented several points of interest, namely, (1) its sex; (2) the imperfect condition of the vagina; (3) the probable bicorned condition of the uterus; (4) the absence of the symphysis pubis; (5) the apparent openings of the Fallopian tubes into the bladder.

Dr. Hall read a paper on neuralgia.

Dr. Anstie's definition of neuralgia was quoted. The ætiology of the disease was the first question discussed. Out of sixty-four cases, to which reference was made, fifty-six were women and only eight men.

<sup>1</sup> Vide Article IX. p. 83 of present volume.

Prosopalgia was found to be more frequent in women and

Hereditary predisposition was alluded to, and age was pointed out as being an important factor, children being remarkably free from it. It is very frequently met with at the adult period of life, especially among anæmic and chlorotic young women, but it is, as a rule, in the old or those prematurely old, that the intractable forms of neuralgia are met with. Worry and anxiety were stated to be the most marked of the predisposing causes. The necessity of paying attention to the direct exciting causes, such as caries of the teeth, &c., was insisted upon. The varieties of neuralgia may be classified according to their local distribution—

Superficial neuralgiæ.
 Visceral neuralgiæ.

The superficial varieties may subdivided into-

(a) Neuralgia of the fifth nerve.
(b) Cervico-occipital neuralgia.
(c) Cervico-brachial neuralgia.

(d) Intercostal neuralgia.

(e) Lumbo-abdominal neuralgia

(f) Crural neuralgia.(q) Sciatic neuralgia.

In the treatment of neuralgia the first thing to be done is to relieve the patient of his pain, be it only for a time, so as to afford an opportunity of treating the constitutional cause, if such there be, at the bottom of the disease.

He gave the particulars of a case, in which the presence of two minute portions of stumps had been overlooked, and the disease was not cured till these were removed; he deduced from this case the necessity for a most careful examination of the condition of the teeth in trifacial neuralgia.

Notes of three cases were read to prove what a speedy and potent remedy croton chloral in five-grain doses three times a day was. The tincture of gelseminum in twenty-minim doses had been found of use; but it was not so uniformly successful as the croton chloral. One of the most useful drugs to begin the treatment of a case of trifacial neuralgia is the chloride of ammonium in half-drachm doses, and it has the advantage that if six doses fail to give relief, it is useless to push the remedy further. Out of eighteen cases, ten were cured, one was unrelieved, and seven did not return a second time; and inasmuch as this remedy produces its effects very speedily, there is every probability that some of these also were cured.

Mention was made of the fact that chloride of ammonium with

a little perchloride of iron formed the basis of a patent medicine for the cure of tic-doloureux.

Among the local applications, the mixture of equal parts of camphor and chloral hydrate gave relief within five minutes in two cases. The aconite liniment was mentioned as occasionally of use.

In the treatment of sciatica it was found advisable to begin with a brisk purge, as the pain is often kept up by a loaded state of the rectum, and then the Haustus quiniæ c. potassii iodido with the application of a blister eight inches long by two broad along the course of the nerve.

Quinine in full doses was recommended in supra-orbital and frontal neuralgia; and in neuralgia generally if dependent on malarious influences or occurring periodically. Arsenic was said to be useful in occipital neuralgia. Iron, besides its action on the blood, also seems to act as a direct nervine tonic, and it is of course largely used in cases of neuralgia occurring in anæmic and chlorotic subjects. The carbonate is a very favourite preparation for this purpose.

In severe and intractable cases of neuralgia the hypodermic use of morphia is unrivalled for procuring sleep and breaking the habit of the pain, so as to give time for other treatment; the addition of a minute quantity of atropia to the morphia, say the  $\frac{1}{120}$  of a grain of atropia with the  $\frac{1}{6}$  of a grain of the acetate of morphia, appears to prevent the morphia acting as a diapho-

retic, and consequently increases its anodyne effect.

Remedies such as the continuous current, acupuncture, and other surgical procedures, were only alluded to casually.

As regards general treatment, the patient must be got into

the best possible condition of health.

With regard to diet, the patient should be ordered the most digestible articles. Pastry, sweets, uncooked fruits, &c., are to be eschewed, whereas fatty articles, butter, milk, cream, oil, and especially cod-liver oil are to be highly recommended.



