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ON ERYSIPELAS,

AND

ITS TREATMENT BY PERCHLORIDE OF IRON.

BY

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The essential cause of erysipelas has as yet eluded discovery; or, in other words, the exact conditions requisite for the production of the phenomena characterizing the disease have never been ascertained. What the precise peculiarity of system is that is requisite for the development of the erysipelatous form of inflamation, we are altogether ignorant of; but we know some of the conditions under which it is more particularly prone to arise. Thus, we are aware that some persons have naturally a greater predisposition to it than others, that the dropsical habit of body and purulent infection of the blood powerfully predispose to the disorder, that the liquids of the dead body admitted into the circulating fluid through an abrasion of the hand, frequently give rise to it; and that the rapid spread of the disease in hospitals, or amongst a community, is dependent on some unascertained peculiarity of the atmosphere. Although the

proximate cause of the disorder is altogether unknown, still the recorded experience of past observers, and the conclusions of modern physicians, all tend to the belief that the disease is a constitutional one, the result of some particular poison, which may either be introduced from without, or generated within the system in consequence of some disturbance of the chemical or vital changes which are ever taking place within the organism. The method of exclusion and the process of induction alike lead to the inference that the general features of the disorder are characteristic of a vitiated or poisoned condition of the circulating fluid. Thus, the results of our daily observations are sufficient to satisfy our minds, that the causes of many other complaints, such as extremes of heat or cold, hunger and privation, intemperance, suppression of habitual discharges, mental emotions or mechanical injuries, are altogether inadequate of themselves to the production of the phenomena which characterize the disease in question. Were erysipelas the simple result of any of these causes, it would not so widely differ in many important respects from the ordinary characters of the inflammatory complaints arising from them ; and it could not fail to be of much more frequent occurrence than it is, seeing that many of the agencies already named exist among all classes and in every locality, and are in daily and hourly operation. That some peculiarly faulty state of constitution is necessary for the development of the disease is also highly probable from the fact that the same unhealthy and

debilitating influences may operate a hundred times on the same individual and fail to produce the phenomena of erysipelas ; whilst, on the very next occasion in which they come into play, they are unmistakeably followed by the speedy occurrence of the disorder.

But again, the employment of the inductive method of reasoning forces us to the same conclusion : that erysipelas results from some altered condition of the circulating fluid, consisting, it may be, in the existence in it of some substance altogether foreign to the animal organism, or of some material normal in another secretion, or in an alteration of those particular proportions of its own ingredients which obtain in a state of health.

We know that, when certain substances are introduced from without into the blood, and in some disorders consequent on the existence in the circulating fluid of particular poisons gendered within the system, and of whose exact nature certain facts induce the belief that we have arrived at a correct knowledge, a peculiar train of symptoms takes place ; and, if we observe a like order of phenomena to occur in erysipelas, we may reasonably infer that they arise from a like cause—an altered condition of the blood—although the exact change in it be beyond our powers of discovery.

The symptoms of erysipelas are too well known to justify any lengthy discussion in this paper ; but for the sake of the sequel, and for more closely bearing out the analogy between it and other blood disorders, it may be well to give a cursory outline of the symptoms presented

by cases of the disease when attacking the head and face, by which strictly medical form of the complaint the remarks in this paper were suggested.

Erysipelas, then, is a constitutional affection resulting from some peculiar poison which gives rise to fever, generally of an asthenic type, and to certain local phenomena which are generally observed on the skin or some of the mucous surfaces, for which particular tissues the virus seems to have a special affinity. It resembles other blood disorders in its outbreak being usually preceded by certain premonitory symptoms, such as langour, headache, listlessness, muscular debility, foul tongue, anorexia, nausea, very frequently vomiting, and sometimes diarrhœa. The actual period of invasion is generally marked by distinct rigors; and these are speedily followed by heat of skin, increased frequency of pulse, greater headache, thirst, and all the symptoms of fever. This fever, as is the law with other blood diseases, most generally precedes or arises apparently about the same time as the local phenomena; and it is not improbable that, in those instances where the local symptoms appeared to be first pronounced, slight fever and other constitutional derangement may have had the initiative, but have been too undecided to attract any very special attention. Commonly about the second or third day of the fever, though this particular time does not invariably hold true, some part of the face, in the majority of cases the nose, but at other times the cheek or the ear, becomes the seat of a throbbing or stinging pain, feels hot

and tender to the touch, assumes a dark reddish colour, and becomes perceptibly swollen. The part feels distended and stiff, the redness and swelling gradually increase; and in doing so, they maintain a distinct and slightly elevated margin. In some instances, the inflammation remains wonderfully circumscribed, confining itself to the face; but in most cases it advances with steady and often rapid progress, until the whole of the face and scalp, and sometimes the neck and upper parts of the shoulders, are involved in the disease. The countenance becomes hideously disfigured; the nose often enormously swollen; the eyes closed from effusion into the eyelids; the lips very large and prominent; the face in general much increased in size; and the scalp swollen, sometimes hard, and sometimes puffy and boggy to the feeling. The course of erysipelas varies greatly on different occasions. In some instances the inflammation is quite superficial. The surface remains unbroken, and after the redness has lasted for three or four days and then gradually disappeared along with the swelling, it becomes the seat of a profuse desquamation. But on most occasions the consequences are more serious; the cuticle becomes raised by numerous miliary vesicles or blisters, from which an exudation takes place that concretes into scabs or crusts; the subjacent surface continues to exude an acrid lymph; or the inflammatory action penetrates deep into the subjacent areolar tissue, giving rise to suppuration or sloughing of the tissue. According as one or other of these courses is observed,

the erysipelas receives the name of Simple, Phlegmonous, or Gangrenous. In some cases, the force of the poison seems first to fall on the mucous membrane of the throat, occasioning the sufferer more or less of uneasiness or of decided pain, and giving to the fauces a dark red colour, and more or less swollen appearance. All cases are in general accompanied at some stage by more or less decided throat affection; but in some instances the throat is undoubtedly the first part to become affected, and the inflammation appears to spread from it to the face by passing through the nares. The late Dr. Todd, in his *Clinical Lectures on Acute Diseases*, mentions, at page 180, a peculiar form of erysipelas which is confined to the fauces, and occasions complete paralysis of the pharyngeal muscles, and consequent inability on the part of the patient to swallow.

In some few instances, the fever may remain to the end of a tolerably sthenic character; but in the great majority of cases, the symptoms, either from the first, or from a very early period of the complaint, are of a decidedly asthenic or typhous nature. It is unnecessary to enumerate all the typhous symptoms, but the most marked of them are a very quick and feeble pulse, feeble cardiac impulse, irregular heat or chilliness, great muscular prostration, tremors, sordes on the teeth, stupor, drowsiness, and low delirium. It has already been stated that the disease resembles other blood disorders in running a definite course, in being preceded by certain premonitory symptoms, and in the fever generally appearing

before the local mischief; but there are other striking points of resemblance between them, which it may be well to notice in a very brief manner. Thus, in some instances, after most of the symptoms have greatly subsided, and the disease apparently run its wonted course, it seems to take a fresh start, and recommences with all its previous severity, although the sufferer may have been removed from every known unfavourable agency. The erysipelatous virus further conforms to the general laws of poisons in attacking more or less violently some internal organ, while there is no retrocession of the external inflammation, in having certain favourite channels or emunctories for its elimination, and in being followed by certain critical discharges. Judging from my own experience, bronchitis would appear to be the most frequent of all internal inflammations in cases of the disease in question; for I have never seen an example of erysipelas of the head and face, in which bronchitis of a milder or graver character did not declare itself at some period or another. Very often the inflammation would appear to be so superficial as not to occasion any particular annoyance, and consequently the invalid may not make any mention of it to his medical attendant whose suspicions are perhaps first excited by hearing an occasional cough during his visit. On more particular inquiry, the patient will allow that he has a little cough, and it may be, a little expectoration; and on applying the stethoscope to the chest, distinct rhonchus, or crepitus, or both, are heard throughout the

bronchial tubes. At other times, however, the patient complains of pain in his chest, of difficulty of respiration, and of his cough and expectoration being troublesome; and on listening with the ear in these cases, strong catarrhal sounds are heard throughout the chest. In seven successive cases which I carefully watched, this bronchial affection supervened; in some it was very mild, in others severe, lasting for many days after the patient was otherwise quite recovered. In some cases, the bronchial affection may be the consequence of the inflammation previously observed in the fauces; but in many it would appear to be quite independent of any local origin, and to result solely from the vitiated condition of the vital fluid, inasmuch as it often supervenes without previous dyspnœa, pain, or other laryngeal distress, and when it could not be accounted for by any imprudent exposure to the ordinary causes of bronchial attacks. At times the inflammation invades the entire bronchial system; and cases are recorded in which it became the immediate cause of death.

The following case, which came lately under my observation, and which I will briefly narrate, afforded sufficient evidence of the supervention of gastritis, which could not be attributed to any retrocession or metastasis of the external inflammation.

Mrs. S——, æt. 64, was attacked on February 7 with erysipelas of the head and face which proceeded in its usual manner till the 12th of the month, on which day she began to feel pain and to experience an annoying

sense of heat in the stomach. On the evening of the same day she complained of increased pain and of great tenderness on pressure, and began to be troubled with severe vomiting, which continued to be most distressing for seven or eight days. During all that time she seemed to experience little or no relief from the remedies employed for its removal. Then she began gradually to mend, but suffered much from uneasiness and irritability of stomach, long after the affection of the head and face had disappeared after running the usual course. This woman had not any gastric affection prior to the accession of the erysipelas, and, as I have previously stated, it was not possible to ascribe it to metastasis of the external inflammation, nor, so far as I could judge, to an extension of inflammation from the fauces.

After the poison has, as it were, exhausted itself on the system, it begins to be thrown out through vast eliminating channels—the skin, the kidneys, and in some cases, I am inclined to believe, the bronchial mucous membrane. My reason for thinking that the bronchial mucous surface at times serves as an emunctory for the elimination of the *materies morbi* is, that in the seven cases in which I carefully noted the fact, the bronchitis did not arise when the external inflammation and the fever were gradually increasing, nor at the time when they were at their height, but when they had begun to decline, and desquamation was about to ensue. It would be interesting to mark the date of accession of these bronchial seizures which I found to accompany every case

which came under my notice, and to observe if, when they first appear very early in the disorder, they remain unaffected by remedies till the period of thorough recovery, or suffer any aggravation towards the period of resolution. Seeing that, in all the cases which came under my observation, neither myself nor the sufferers could account for the attack from imprudent exposure to cold or the ordinary exciting causes of bronchitis, and seeing that bronchitis of a graver or milder character was always present at the period of resolution, the idea occurred to me that it might result from the noxious matter being more particularly directed at the time to the bronchi, from a spontaneous effort of nature to further a cure by availing herself of these great secreting surfaces as channels for its elimination from the system.

That the cutaneous surface plays an important part in the process of removing the offending matter, is inferred from the highly irritable appearance it presents, from the profuse desquamation which always precedes final restoration to health, and from the fact that instances have occurred where a sudden check to the cutaneous function from imprudent exposure has been followed by acute and violent kidney disorder.

The chemical and microscopical characters of the urine in the convalescent stage of all the cases I have had an opportunity of examining, justifiy, I think, the belief that the renal organs also assist in draining off the poison from the system. The characters to which I refer are, the presence of albumen and of large quantities of

renal epithelium. Dr. Warburton Begbie, in an interesting and most instructive paper in the *Monthly Journal of Medical Science* for October 1852, drew attention to the fact that albumen and renal epithelium are invariably found in the urine of the convalescent from simple scarlatina, and very often in that of persons recovering from severe attacks of erysipelas. I have examined the urine of a goodly number of convalescents from erysipelas, and I have found that albumen and epithelium were present in every instance, whether the case had been severe or mild. We must be careful not to attach any special importance to the presence for a short time of albumen in the urine, as it frequently appears in fevers generally, and in many or most inflammatory affections; but there are certain points connected with the albuminuria, and also with the renal epithelial desquamation, in cases of the disease in question, which merit more particular attention in a pathological and diagnostic point of view. The amount of the albumen and of the epithelium were always more abundant in cases where there was profuse, than in those instances where there was sparing cutaneous desquamation. The albumen always appeared towards the close of the disease, sometimes previous to, but generally after the cutaneous desquamation; and it generally persisted during the process of cutaneous desquamation, the average duration being from two to five days.

This condition of the urine many consider of no pathological significance beyond the mere detachment of

epithelial cells, and the excretion of organic elements so transformed as to constitute fluid albumen. I would here ask whether these peculiar features of the urine, when persisting for some days, are indicative of no other pathological conditions than those already mentioned as allowed by some? Is there no congestion and increased pressure on the vessels of the kidneys in these cases? and are not the facts of the blood being disordered, and perhaps attracted in greater quantity than usual to the renal organs at the period of convalescence, sufficient to occasion such an amount of congestion and stasis as leads to slight serous transudation, and usually passes off without leading to any serious anatomical lesion. My own conviction is, that in consequence of the disordered state of the blood, it becomes unable to pass, as in health, through the intertubular capillaries. A certain stasis takes place; this causes a greater pressure than natural on the Malpighian bodies, and they suffer just such an amount of expansion as allows a small amount of serum to pass through their walls. The renal cells, in striving to separate the foreign matters from the blood, undergo such a modification in their nutrition as causes their detachment and subsequent appearance in the urine. Anything more than a trifling and transient congestion may probably be owing to the most deleterious properties of the poison having been exhausted previous to the period at which there is any special determination to the kidneys, and to its copious discharge through the cutaneous surface. This slight renal disturbance very

rarely leads to serious anatomical lesion of the organ, and, whether owing to the nature of the poison or other cause, a sudden and severe check to the process of cutaneous elimination is very seldom followed by the disastrous kidney disorder which so frequently happens under similar circumstances in some of the eruptive fevers. Instances, however, are recorded in which all the phenomena of acute desquamative nephritis could be clearly traced to suppression of the cutaneous elimination from imprudent exposure to cold. Besides epithelium and albumen, the urine always contains large quantities of lithate of ammonia, and occasional crystals of uric acid.

The state of kidney under discussion does not in general cause any marked symptoms; but I cannot, from my own experience, say that there is never any symptom which could be referred to the state of the renal organs. Slight diminution of the normal amount of water, and lumbar uneasiness, are two symptoms which I have found generally to attend the albuminous condition of the urine. The first symptom, though never pronounced in any degree, was quite appreciable in several instances, and lumbar uneasiness was frequently so great as to attract the patient's own attention. I have always observed, moreover, that the subjects of the disease, although decidedly what is usually termed convalescent, never made marked or rapid progress towards improvement until the urine had resumed its normal characters.

The peculiar features of the urine are common at the

same period to several of the eruptive fevers; and here is another link in the chain of analogies between erysipelas and these diseases.

Whilst speaking of the urine, I may state that I have observed in some cases that the chlorides were diminished to a greater degree than that which usually takes place in febrile states of the system. I failed by the ordinary tests with nitric acid and nitrate of silver to produce any precipitate in the urine of a woman, æt. 36, on the sixth day of the fever. On the next day there was a very slight, but quite appreciable, precipitation of the chlorides. In a sample of urine from the same patient on the second day after disquamation was fairly established, Mr. Brazier, of the University of Aberdeen, found that, in 1000 parts of the water, there was only 0.31 grains of chloride of sodium. In a man, at 46, the chlorides did not amount to 1 part in 1000 parts of the urine obtained after desquamation was commenced. In these two cases the chlorides returned to their normal amount much more slowly than in other febrile disorders. Was this a peculiarity of these two cases, or do the chlorides generally suffer a greater diminution, and return to their normal amount less speedily, in erysipelas than in the other eruptive diseases?

Before proceeding to another part of the subject, I would here briefly mention that the analogy between the disorder in question and the other exanthemata, though greatly lessened, is not entirely lost in the question of contagion. Many deny that erysipelas is in any degree

contagious, and it is most undoubtedly the least contagious of all eruptive fevers; but circumstances related by Dr. Wells, Professor Arnott, Dr. Elliotson, Dr. Watson, and others, clearly prove that at times it is propagated by contact. Having mentioned many striking points of resemblance between erysipelas and the eruptive fevers, it is necessary to state that it differs from them in being of shorter duration, less frequently fatal, much less infectious, and much more prone to attack the same individual oftener than once,

Erysipelas causes death in three different ways—by asthenia, by asphyxia, by coma. In some instances the patient dies from pure exhaustion, consequent on the highly debilitating effect of the disorder. At other times the sufferer's life is very speedily extinguished by a sudden seizure of intense dyspnœa; and on inspection after death, the fatal result is found to have arisen from œdema of the submucous tissue of the glottis and epiglottis. Death by apnœa may, however, be more gradually induced by intense bronchitis and pulmonary congestion, which reveal their existence both by signs during life, and by the appearances discoverable in the lungs on inspection after death. A third mode of fatal termination is by coma and delirium. These may in a few instances arise from genuine inflammation within the head; but the great majority of dissections tend to prove that they are caused by mal-nutrition of the brain substance, owing to the circulation of vitiated blood through its vessels.

Treatment,—As the exact nature of the poison of erysipelas is unknown, we are not in possession of any remedy having the virtues of an antidote. Neither can any single plan of treatment yet devised be recommended as equally applicable to all cases, inasmuch as the features of many greatly differ, owing perhaps to the particular diathesis of the subject, or to his state of general health, and the circumstances he was placed in at the time of seizure, or to the peculiar type of the prevailing epidemic. That the last-named circumstance requires to be carefully weighed in every instance will at once be readily granted; for one visit to the majority of the cases of erysipelas of the head and face as now met with, will at once convince us that they are altogether unsuited for the blood-letting and other powerful antiphlogistic remedies which seem to have been so beneficial according to the records of bygone observers.

On the other hand, that the excessive stimulation so strongly advocated by some for every case of the disease in question, is not an indispensable remedial agency for successful treatment in most instances, may, I humbly think, be reasonably inferred from the multitudes of recoveries which have taken place under a more moderate use of stimulants.

The conviction that erysipelas generally tends to spontaneous recovery is by no means incompatible with holding the belief, that much may be done by suitable treatment to check the intensity of the disease, to alleviate or remove many of its most distressing symp-

toms, to maintain the vital powers, to moderate inflammatory action, and to assist the natural efforts at cure, and thus more surely conduct the disease to a favourable termination. Examples of the disease often occur, which from the first present a very unfavourable aspect, yet issue in recovery. Such recovery we may justly ascribe to the line of treatment pursued. It is therefore the duty of every one to place on record any plan of treatment which he thinks has been attended with success, and allow it to get a fair trial in the hands of others; to state fairly the effects which appeared to him to follow the employment of any particular remedy, in what respects it modified the intensity of the disease, and what symptoms it alleviated or controlled; without trying to deny that much is done for recovery in this disorder by the spontaneous operations of nature. It has always appeared to me, that in a careful study of this as well as other diseases, we discover certain landmarks or beacons, as it were, to guide us to the adoption of a scientific and rational method of treatment. We find, for example, that the disease cannot be cut short by any known agency, that it must run a definite course, that it early produces a most depressing effect on the system, that there are symptoms more particularly distressing than others to the sufferer, and that in due time nature employs a machinery of her own for the removal of the noxious matter from the system.

The great indications of treatment, then, suggested by a consideration of these points are—to uphold the

powers of the system, to ameliorate or control the most distressing symptoms, to obviate the tendency to death, and to assist, if possible, the natural efforts at cure.

The first indication is to be fulfilled by removing as speedily as possible any existing internal sources of irritation, by correcting any hepatic or alvine disorder, by rigidly enforcing thorough ventilation with due regard to the maintenance of an equable temperature and guarding against exposure to currents, and by giving some medicine or remedies capable of imparting tone to the system and of upholding the vital powers. A marked feature of the disease, as already mentioned, is early depression of the various parts of the organism—the energy of the nervous system becoming rapidly exhausted; —the vigour of the muscular system being speedily impaired;—the tone of the vascular system lowered,—the capillaries relaxed, and serous effusions quickly ensuing. I was induced, by the high terms in which many have written in favour of the muriated tincture of iron recommended by Mr. Hamilton Bell for the treatment of erysipelas, to try what effect the perchloride of iron might have on the disease. Having given it a fair trial in five successive cases, I will simply state the effects which I observed to follow, in the hope that others may give it a trial, and thus an opportunity be obtained of comparing the effects produced in different cases, and the means be acquired of arriving at some definite understanding as to its value in the generality of cases. In all the cases in which I used it, a decidedly beneficial effect seemed to be

produced. The febrile condition seemed in all to be relieved, the frequency of the pulse reduced, the powers of the system generally upheld, and the stomach and bowells in no way irritated. Two circumstances I would particularly notice with regard to the perchloride in the cases in which I tried it. One which I carefully noticed was, that its use seemed in no way to be contra-indicated by headache and sensorial disturbance; instead of increasing, it seemed to diminish these unpromising symptoms. The other circumstance to which I would particularly direct attention, is, that in the above cases the serous effusion was, throughout the entire course of the disease, less copious, and also disappeared much more quickly than in the generality of equally grave examples which I had previously seen.

Two persons, who had a very severe attack, stated to me spontaneously, without my directing their attention in any way to the subject, that they very speedily felt a most decided general benefit from its use; and the others, on inquiry, said they "felt it keep down the fever" and speedily diminish the "tightness" of their face.

The taste of the perchloride is to some very unpleasant, but it may be quickly removed by thoroughly washing out the mouth with water immediately after taking the solution. Special attention ought to be paid during its employment, to act on the bowels from time to time by some very mild laxative. What its specific mode of action is, I do not pretend exactly to know. Perhaps it

may act beneficially in virtue of powerful tonic properties or its therapeutic value may reside in some peculiar influence it exerts on the blood, in consequence of its powerful disinfectant properties, or in its imparting tone to the capillary system, and counteracting the general relaxation of the capillary vessels. In the cases in which I used the medicine, I ordered it to be taken in quantities varying from fifteen to twenty drops every two and a half or three hours, according to the peculiarities of each case. This was persevered with till convalescence was fairly established, after which the iron was greatly reduced, and a drachm-and-a-half or two-drachm doses of liquor ammoniæ acetatis ordered to be taken three or four times a-day at proper intervals. The liquor ammoniæ acetatis acts very beneficially in the convalescent stage, by being a very gentle stimulent to the nervous and vacular systems, a mild diaphoretic, and un-irritating diuretic; and thus, by gently stimulating the functions of the skin and kidneys, it fulfils the last-named indication of treatment. In the course of any attack of erysipelas, just as in all fevers, the lowering effect of the disease may become so great, and the tendency to death from failure of the vital powers so strongly marked as imperatively to call for the use of powerful stimulants. The employment of these agents, in this and in all diseases, to be beneficial, requires the greatest prudence and judgment in their selection and apportionment, and the most careful watching of the effects they produce. The exact form of stimulant, whether wine, brandy, or

other spirit, must be determined by the particular situation of each individual case, and the previous habits of the patient.

The delirium and coma which so often accompany erysipelas, are, according to general consent, the result of diminution or arrest of the cerebral energy, caused by mal-nutrition of the brain substance, and to be treated most successfully by the cautious use of stimulants. Cases, however, may occur in which some of the symptoms of genuine phrenitis appear, and then it might be judicious to employ some form of local depletion.

The bronchitic attacks are to be treated by mustard cataplasms, blisters, or turpentine stupes to the chest; but the two latter I have once or twice seen irritate the renal organs very much in this disease. Should the attack supervene when the system is very low, stimulents must be given; but if during the period of convalescence, some simple stimulating expectorant, in addition to the counter-irritation, generally suffices for cure. If symptoms of œdematous effusion into the submucous tissue of the glottis and epiglottis arise, the speedy performance of tracheotomy affords almost the only chance of saving life. Of all local applications, perhaps the most serviceable and least objectionable, under all states of the skin, are flannels wrung out of hot water. This application, no doubt, is open to the objection of requiring almost constant attention, and of occasioning considerable trouble for its proper employment; but its advantages in many respects over unguents, dry powders, or other

appliances, more than compensate for these slight drawbacks. When proper precautions are taken to maintain a uniform heat, by frequent renewal of the flannels, the application possesses the great advantages of being cleanly, generally agreeable to the feelings of the sufferer, unirritating to the skin, calculated to prevent any repression of the external inflammation, and not forming, as unguents and powders do, with any exudation which may have taken place, the scabs and crusts which become sources of great local irritation, and general discomfort to the invalid.

It may be well to append one or two of the cases in which I tried the perchloride of iron.

Cases illustrative of Treatment.

I. On the 18th of January, 1861, I was called to see Mrs. C., æt. 42, poor woman, and mother of six children. Seven years ago, she had a severe attack of erysipelas of the head and face. On the 17th she had been seized with pains in her limbs, with sickness, vomiting, and rigors, which were speedily followed by intense febrile symptoms. I found her face, but more especially the right side of the nose and right cheek, of a dark red colour, much swollen and very painful; tongue loaded; pulse 108. Ordered a rhubarb and magnesia draught, and to take fifteen drops of the solution of perchloride of iron every three hours. Flannels, wrung out of hot water, to be applied to the face.

19th.—Erysipelas extended over face and scalp;

great headache; bowels opened. To continue the drops.

20th.—Restless night, and a good deal of wandering. Coherent at visit. Pulse 96.

21st.—Had a bad night, but states she has less headache to-day; and feels her face less distended.

22d.—Greater clearness of ideas; distinct diminution of the inflammation and swelling.

23d.—Pain in face and head much less; swelling subsiding. As bowels have not moved for two days, ordered a magnesian aperient mixture.

25th.—No confusion since last report. Tongue cleaning. Pulse 89.

26th.—Head and face improving rapidly. Complains of cough, and slight pain in chest. Catarrhal sounds heard on applying the stethoscope. Mustard cataplasms to front and back of chest. The drops to be taken every four hours.

27th.—Swelling entirely gone; desquamation commenced; urine albuminous and containing renal epithelium; cough troublesome. Blister to be applied to the chest; and to take two drachms of the liquor ammoniæ acetatis four times a day in a little saline mixture.

30th.—Patient has been up for the last two days; and at her own request I discontinued my visits. On examining a sample of her water sent up to me next day, I found it quite normal.

II. J. R., æt. 46, of intemperate habits, was seized on the 20th March, 1861, with headache, vomiting, and

rigors, and in a short time became very feverish, and experienced a sharp stinging pain in the right side of his nose, which, when seen on the 21st, was of a dark red colour and much swollen, as were also the cheek, and other parts of the right face in general. Pulse 110. Ordered a little grey powder and rhubarb pill, to be followed by a black draught; and to take fifteen drops of solution of perchloride of iron every three hours. Warm fomentations to the face.

22d.—Very ill; great swelling of face and scalp; much wandering.

23d.—Less fever; collected at visit; pulse 100.

24th.—Confused at night, but less restless than on the previous night; redness and swelling a little diminished. Continue the drops.

25th.—Less pain in head; quite collected at visit; swelling of face less.

26th.—Swelling subsiding; pain diminishing; tongue cleaning. To have a magnesia and rhubarb draught.

28th.—Complains of pain in chest and of difficulty of breathing; rhonchus and crepitus heard on auscultation; swelling of face almost gone; urine albuminous. Blister to front of chest; drops to be taken every four hours; two drachms of Liq. Ammon. Acet. four times a-day.

30th.—Says he feels quite well, save that the pain in the chest still continues. Mustard cataplasm to back of the chest.

April 1st.—Has been up since last report. Urine normal.

III. Mrs. B., æt. 29, was seized on the 30th March, 1861, with inflammation and swelling, extending over her nose and cheeks. Pulse 100. A dose of grey powder and James's powder ordered to be given, and to be followed by a magnesian aperient draught; and to take 16 drops of the solution of perchloride of iron every three hours. Warm flannels to face.

31st.—Swelling increased; pulse 90; bowels opened.

April 1st.—Less pain and slight diminution of the swelling.

2d.—No fever; tongue cleaner. Feels little or no pain.

4th.—Is so much better as to be out of bed. To take the drops every four hours, and two drachms of Liq. Ammon. Acet. four times a day.

5th.—Cough and pain in chest. Catarrhal sounds heard on auscultation. Ordered the ammonia in a little cough mixture. Blister to chest.

7th.—So well as to leave for her home in the country.

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