closed cells, and consequent upon two necessary antecedents,—a vital power or inherent disposition imparted from the parent to the offspring, and certain external conditions, in which are included food, air, water, and temperature. The lowest living beings are simple isolated-cells; the next in order are aggregates of slightly-cohering-cells; then follow the structures, composed of coherent-cells; after which come the fibrous and cartilaginous textures; and lastly, bone or wood. And it is to be particularly observed as we ascend the scale of animated nature, that the additional later-formed or higher elements do not supersede, but are superadded to, the prior ones:—thus fibrous elements are superadded to the cellular; cartilaginous to the fibrous and cellular; and bone to the cartilaginous, the fibrous, and cellular, until in the human body we meet with all the varieties,—osseous, cartilaginous, fibrous, and coherent cellular textures, superadded to slightly coherent and incoherent cells. All these textures, and every organ in the human body, in their primary or embryo state, are groups of slightly cohering cells, from which, by an epigenesis and morphology, are formed coherent cellular textures, traversed by numerous vessels or channels, conveying a current of the primary forms,—incoherent cells; to these are subsequently added various fibrous elements, and lastly, cartilage and bone.

The phenomena of inflammation observe the same order. The first steps of the process are indicated by an unusual accumulation of incoherent red and colourless cells derived from the blood current, the latter of which remain stationary upon the affected texture, become slightly coherent, and discharge their protoplasmatic contents, the conformable or unconformable morphology of which determines the nature of the product and the sthenic or asthenic character of the disorder. The products of a conformable metamorphosis added to the pre-existing natural elements, constitute sthenic, curable and conservative inflammation. The products of an unconformable metamorphosis, whether irregular or retrograde, added to the pre-existing textures constitute asthenic inflammation.

The phenomena of scrofulous diseases also commence with an accumulation of incoherent cells from the same source, (the blood,) and it is by the products of the unconformable metamorphosis hindering their natural growth and supplanting the natural elements, that these diseases are produced.

ON A NEW AND SUCCESSFUL MODE OF TREATING FEVER.

By WILLIAM GILL, M.D., Physician to the Nottingham Dispensary, and Consulting Physician to the Union Hospital, Nottingham.

(Read before the Provincial Medical and Surgical Association, at the Anniversary Meeting, at Derby, Thursday, August 5th, 1847.)

At a period when fever, to an alarming extent, prevails in our great manufacturing towns, I have much pleasure in bringing before the consideration of the members of the Association, a new method of treatment of fever, which is generally applicable, and has proved very effective. Twenty-five cases of fever occurring in our Union Hospital, during the last two months, have tested its power. This remedy is capable, not only of controlling some of the most distressing symptoms of the typhoid state, but frequently of arresting its progress, both at the commencement, and at a more advanced stage of the disease. Still a more extended experience is required before its merits can be fully determined. It is said, that very lately, in Liverpool, no less than 10,000 people were at the same time suffering from typhus fever, accompanied with a considerable mortality. Its attacks were not limited to the poorer classes, as many of the Roman clergy, and several in the higher ranks, have fallen victims to its power. In London, Glasgow, Leeds, Huddersfield, and Manchester, and other large towns, the same type of fever exists. Should the constitution of the atmosphere, during the autumnal season, prove favourable to its dissemination, may we not expect its wide spread in an epidemical form? In Liverpool, as in other large places, the introduction of typhus was traceable to the vagrant Irish. Its rapid diffusion may be easily accounted for, by their gregarious habits. Wherever they wander, a family of contagious disorders is carried with them. Small-pox, measles, skin diseases, and fever, were imported wholesale into the Union Hospital, by the droves of Irish driven by famine from their native land. The appearance of these unfortunates, especially the children, was wretched in the extreme, and told an unerring tale of hunger and suffering. Very soon typhus fever broke out, and raged with considerable severity.

Holding the appointment of Honorary Physician to the Hospital, I had a fair opportunity of trying a method of cure, the success of which had frequently reached my ears whilst living in Germany. I think it proper to mention that the hospital, in connection with the Nottingham Union, is a building well adapted for the treatment of fever, the rooms being lofty, and well ventilated, and kept very clean, and readily admits of the classification of patients. The diet is wholesome and liberal, and an intelligent medical officer, Dr. Stiff, has the management of the in-door sick. After the commencement of the mode of treatment to

be described, *every new case* was submitted to its influence—twenty-five in all. During the last three weeks only two fever-patients have been admitted.

Before entering more immediately on the object of this paper, it will be right to describe, concisely, the general features of the prevalent fever. Occurring, as it chiefly did, amongst the half-starved Irish, we might naturally suppose it would be characterized by symptoms of a low typhoid character. In most cases the *immediate* cause of the attack was traceable to sleeping in crowded lodging houses, the usual abode of fever in our large cities; the proximate causes, doubtless, were over fatigue, and insufficient and unwholesome food. The term "hunger pestilence," has been aptly applied to the disease. A true typhoid gastro-enterite, was present in many of the patients, closely resembling what so frequently is observed in the Parisian hospitals. Whether the essentiality of the fever existed in the condition of the muco-alimentary membrane or not, it is not my intention here to discuss. This, however, I remarked, that *so soon* as the signs of gastro-alimentary irritation were subdued, the signs of general fever subsided. Some two or three cases which I shall read, will corroborate this observation. In the generality of patients under my care, not only was the gastro-alimentary membrane affected, but also the muco-pulmonary, as evidenced by cough, shortness of respiration, and frequently universal sonorous râles, affecting the whole of the chest. In most of the Irish sick the skin was spotted with petechiæ, of different sizes and colours, chiefly developed on the abdomen and chest. This was not remarked amongst the English cases. There was no discharge of blood from the inner membranes. Œdema of the lower extremities occurring early in the disease was generally a fatal symptom, though we had two cases of recovery in boys, who were universally anasarcaous from the commencement. The disturbance of the sensorium was marked by low muttering delirium, sometimes wandering about the bed-room, constant picking at the bed-cloths, and subsultus tendinum. Some were affected with a heavy, comatose, and stupid state, from which they were with difficulty aroused, and when aroused, with difficulty were made to understand questions; they relapsed immediately into the same lethargic condition when left to themselves. This comatose condition often continued till convalescence was established, and in some even later. It seemed a perfect prostration of all mental energy, and was only relieved as the bodily powers regained their tone. In no one case did active delirium occur. The secretions from the bowels were thin, frequent, black, and offensive, and often attended with severe griping, but no bloody discharges. The function of the bladder in one or two individuals was suspended, and it was necessary twice daily to use the catheter. The usual period of the termination of the fever seemed to be from the

eighteenth to the twenty-first day, at which time the patients were left in a state of the greatest prostration. When the case terminated fatally, an unrousable unconscious coma closed the scene. The usual symptoms of fever were generally present,—as the hot dry skin, black tongue; urgent thirst; pulse varying from 90 to 130; insomnia; and pains in head, back, and limbs, &c. After this brief description of the general features of the disease, we will now proceed to the treatment.

I am well aware that a great prejudice exists in the profession against the treatment to be advocated, partly because it is opposed to preconceived opinions, and chiefly from the unprofessional manner in which it has been ushered into notice. I feel certain, however, that I am addressing a body of gentlemen willing to receive *truth for the sake of itself*, not looking to the source from whence derived, but only to its sterling quality. With perfect confidence, therefore, I throw myself on the candour and liberality of my professional brethren, whilst I detail a treatment of fever, as yet untaught in the schools, and unrecognized by the profession. If future experience shall confirm my own, as to its curative properties, it will be a source of gratification to myself in having been the first to bring its merits before this enlightened Association.

I believe that Dr. Currie, of Liverpool, was the first scientific English physician who enlisted cold water as an external remedial agent in the treatment of fevers. Successful as the practice was under his direction, how little has it been followed in later times! It is only within the last few years that the prejudice which existed against the internal and external use of water has begun to subside. Perhaps the prominence of the sanitary questions, and the many evils proved to arise from the want of a due supply of pure water, has had much to do in removing this groundless prejudice, and may have produced an undue re-action in its favour, causing it to be considered *not only* as necessary to a healthy condition, but as a *curative agent* of universal efficacy. Hence perhaps the public mind has been somewhat prepared to receive the hydropathic theory with much more favour than its intrinsic merits demand. An universal remedy will ever find many advocates, and in a numerous profession like ours, there are ever men to be found who, from selfish motives, will pander to this diseased taste of the public mind. We, as an Association, must ever protest against such exclusive theories as prevail in our days, being in our opinion unscientific, opposed to experience, and calculated to lead to incorrect views respecting the power of many known and valued medicinal agents. In making this protest against any exclusive theory for the cure of diseases, we must not rush into the opposite extreme, and from disbelief of their universal efficacy, deny their particular efficacy, *when* the touchstone of experience speaks to the contrary.

The plan which I have adopted for the cure of fever has been a modification of Dr. Currie's. Instead of pouring buckets of cold water over the body, I have enveloped it in a wetted sheet, an instrument more effective than Currie's in reducing the temperature of the body, and producing a warm and comfortable perspiration, which did not uniformly follow his plan. The fear of evil consequences from this treatment is groundless. I give no opinion as to its utility except in cases of fever. Here, however, I can speak with confidence. When the skin is burning-hot, and the mouth and tongue parched, the application of a sheet, wrung out of cold water, and applied *closely* to the whole surface of the body, and evaporation prevented by the application of three or four blankets placed over it, produces a most grateful feeling of refreshment, which is soon followed by a more or less warm perspiration. In young people this perspiration breaks out in from five to ten minutes after its application; in middle-aged people the period is longer. Many uncomfortable sensations are soon relieved by its use, such as the muscular pains in the back, thighs, and legs, and the sense of aching and weariness; the thirst often becomes less, and even the dry tongue sympathizes with the relaxing influence induced on the cutaneous surface. I have seen the low moaning delirium subside whilst under its use; and some patients who have not slept before, now doze, especially if the hair has previously been cut short, and a flannel night-cap wetted with vinegar and water been applied to the head.

The simple plan I have followed has been this:—On a flock bed I have placed from three to five blankets, superimposed over these a sheet wrung out of cold water, on which the patient, stripped, is placed, with legs outstretched, and arms to the side; the sheet is then drawn tightly around up to the neck, and inclosing the feet; first, one blanket, then another, and so on to the whole number, are tightly drawn over the sheet, so as to have the *whole body well and closely packed*. In this state the patient lies from a quarter of an hour to one or two hours, according to the object in view, and the effect produced. Some get tired at the end of half an hour, some can continue for one or two hours, and feel very comfortable. As soon as a gentle perspiration commences, a wine-glass full of water is given frequently. At the commencement of this treatment, in a case of fever, I have generally ordered its use for one hour; after that time the wet things are removed, and the sick person is placed in bed, well wrapped in three blankets, and allowed to perspire for three hours; afterwards, the blankets are to be carefully removed, one at a time, so as to allow the perspiration to subside gradually, and the patient is then placed in bed between the sheets.

During the whole of this period, small quantities of water should be given. In the summer, during this process, a free ventilation may be allowed in the chamber;

in winter, it is necessary to have a good fire, and to have one blanket well warmed to apply around the body, so soon as removed from the wet sheet.

Several cases of incipient fever have lost all traces of disease after the first application. If the fever is not reduced, the next day the same plan must be repeated, keeping the patient in the wetted sheet from half an hour to one hour, according to the intensity of the symptoms, and in the blankets from one to two hours. This may be repeated every day till indications of a *cool* skin arise, then it must be immediately discontinued.

During some period of this treatment, the temperature of the atmosphere being very high, (75° to 78° in shade,) I have not found it advisable to keep the patient as long as two hours sweating in the blankets; from half an hour to one hour was sufficient. A longer period caused the pulse to be accelerated, instead of lowered, which latter is the usual effect of the treatment. In very hot weather, when a free perspiration has been induced at the commencement of the fever, I have adopted the following plan:—To wrap the sick person for half an hour in the wet sheet, covered lightly with one blanket; to be then washed all over with a towel wetted with tepid water, then rubbed dry, and placed in bed between the sheets. I have not found it necessary to make use of this treatment more than five times to the same individual; generally after the third or fourth application the skin becomes cooler, and the other signs of fever gradually subside. When the skin becomes cool, and the tongue less dry, I have instantly discontinued all water remedies, and given bark, wine, and broths, and it was surprising how soon convalescence and strength become established. During the whole course of the fever milk and water, or weak broths, were allowed, *ad libitum*. In one person, twice, in the course of the same day, owing to the intensity of the fever, it was found necessary to repeat the wet sheet, using it the second time for only half the period of the first; a comfortable night ensued.

Without doubt this is a most effective mode of *quickly* reducing the temperature of the body; an equilibrium is soon established between the cold of the water and the heat of the body, and the patient becomes bathed in a natural vapour bath, as may be felt by placing the hand under the bed-clothes. Where the fever runs high, and the delirium is violent, the wet sheet may be safely applied for short periods, (two minutes,) several times in the course of the day. This will be found a more effectual mode of reducing the cerebral excitement, than any other means with which we are acquainted. This refrigerating plan, used for ten minutes, during an evening exacerbation, will often produce a few hours refreshing sleep.

I must confess that I had great doubts as to the *safety* of this treatment, where the mucous membranes

of the bronchi and gastro-alimentary passages were complicated. Very soon my fears on this head were dissipated by the convincing evidence of experience; in fact, *these* proved the cases in which the decided benefit of the treatment was most marked. The quick and embarrassed respiration, dry cough, and sonorous râles, subsided quickly after one or two applications of the wet sheet; the cough became looser, the râles moister, and expectoration was established.

The same happy change also occurred where the gastro-alimentary membranes were disordered. Generally the first wet sheet puts a stop to the diarrhœa, and soon afterwards pain and swelling disappeared. A confined state of the bowels was frequently the effect of the wet sheet, and it was found necessary in several of the patients to resort to small doses of castor oil. In three or four cases the symptoms of gastric and abdominal irritation or inflammation were so violent, as to have justified the employment of leeches, calomel, and opium; and indeed we know that depletion by leeches is the usual treatment followed in the Parisian hospitals, and yet by the simple means mentioned, in three days every bad symptom had vanished. A great saving is made to the patient's strength when we can dispense with the abstraction of blood.

I am anxious to make this paper altogether practical, hence I will not enter into any theory respecting the *modus operandi* of the wet sheet. At some future time perhaps I may avail myself of our excellent *Provincial Journal* for such purpose.

And now, before I read some cases, a most important question suggests itself. Is it possible to arrest the progress of typhus fever after once fairly established? I am well aware that individual experience, and the testimony of our best writers on the subject, answer this question in the negative. It is therefore with great diffidence I oppose my experience against this concurrent testimony. *Facts* are stubborn things, and can only be contradicted by proving their incorrectness. My limited experience distinctly shows that, *fever in all its stages has been arrested*. If a more lengthened trial of this treatment should corroborate this simple statement, a pleasing addition will be made to our stock of professional knowledge, which may prove of considerable advantage to suffering humanity. I think it right to add that many of the patients in the Union Hospital were occasionally visited by professional friends resident in Nottingham, and were daily seen by the House-Physician.

I shall read a selection of cases in order that I may not unnecessarily occupy the valuable time of this meeting.

CASE I.

Michael Kane, aged 18, Irish vagrant, of vigorous constitution. He has been in the Union Hospital five days, under the care of Dr. Stiff, and taken salines.

June 28th. The following is his present condition:—

Supination in a lethargic state, and unconscious, unless violently aroused; the face purplish red; eyes blood-shot and pupil dilated; constantly picks at the bed-clothes; subsultus tendinum; low muttering delirium; the skin furnace-hot; tongue dry, shrivelled, black, and covered with sordes; diarrhœa; general tympanitis of abdomen, without much expression of pain when pressed, unless aroused, and then his face indicates the existence of pain; the urine and stools are not passed involuntarily; the abdomen and skin generally covered with dark-coloured petechiæ; the respiration hurried, forty-four in the minute, and the stethoscope reveals universal bronchitic râles in the chest; pulse 130, weak and hurried. The treatment ordered was the application of the wetted sheet for one hour, blanket for two hours; the head to be shaved, and a flannel night-cap, wetted with vinegar and water, to be constantly applied. To have milk and water *ad libitum*.

There evidently were clear signs of head, chest, and abdomen complication. The blood-shot eye and purple countenance, accompanying a nearly unconscious state, indicated a congestive condition of the brain. The stethoscope revealed a similar condition in the lungs, and the universal swelling of the abdomen, attended by diarrhœa, and by pain when the patient was partly sensible, added no little to cause a most unfavourable prognosis to be formed.

June 29th. The aspect is better; has passed a better night; the picking at the bed-clothes and the low muttering delirium are quite subsided; the skin is cooler and rather inclined to moisture; the purging no longer continues, and there is less tympanitis; breathing and dry cough less troublesome; respiration not so frequent when lying quiet, but the slightest movement causes it to be accelerated; the râles moister; the man more intelligent when aroused, but still instantly falls into a doze when left to himself; the tongue not so black or dry; the pulse come down to 100, regular and soft. He sweated much both in the sheet and blankets. To repeat the wet sheet and blankets as before.

30th. Continues better in all respects. No further application of the wet sheet.

July 1st. The man is convalescent; skin cool and moist; tongue has nearly lost all marks of dryness and blackness; urine free and paler coloured; bowels open once daily; intelligence nearly restored; pulse 90; the chest and abdominal complications rapidly subsiding; the patient asks for nourishing diet. To have the bark, mutton broth, and bread and milk.

July 4th. To have meat daily.

5th. Is able to walk in the room.

6th. Is down stairs in the yard and well.

CASE II.

Martin Glynn, Irish vagrant, aged 13, has been ill three days.

June 9th. There is intense heat of skin, and flushing of the face, with pains in the head, bones, abdomen, back, and legs; great thirst; tongue deep red, and covered in the centre with a cream-coloured fur; great pain in epigastrium, and a tympanitic condition of the abdomen, with diarrhœa; there exists slight cough, but no

râles in the chest; the tongue is tremulous, and subsultus tendinum is present; no sleep; pulse 110, rather sharp; urine scanty, and high-coloured.

To have the wet sheet for one hour, and blankets for three hours. Milk and water to drink. The abdominal complication was most marked in this case—a *true typhoid gastro-enterite*.

10th. Continues in many respects the same; the diarrhoea, however, has subsided. Was ordered a repetition of the treatment, and the vinegar and water lotion to the head.

11th. Says he is better to-day; the skin is cooler, and inclined to moisture; face very little flushed; tongue becoming less dry and red; headache better; no pain in epigastrium or abdomen; bowels confined; urine free, and paler; less thirst; pulse 110, but not so sharp. To repeat the wet sheet as before.

12th. Convalescent; slept the whole of the night, and makes no complaint this morning, except of weakness. Face cool; headache gone; tongue clean and moist; urine free; pulse 64, very soft; appetite returning. To have mutton broth, and bread and milk.

13th. To have rice pudding and meat.

16th. Is able to walk in the yard, and may be considered well.

CASE III.

Thomas Gafen, Irish, aged 14, of healthy habits, ill for three days.

July 8th. Face flushed and anxious; skin very dry and hot; tongue of a vivid red, and in the centre covered with a dirty cream-coloured fur, becoming dry and black in places; great thirst; throbbing pain in the head, epigastrium, and limbs; pulse 120, wiry, and small; considerable tenderness in epigastrium; gurgling in iliac region, accompanied with diarrhoea; the respiration hurried; frequent cough, and universal sonorous râles in the chest; no sleep; urine scanty. Was ordered the wetted sheet for one hour, and blankets for two hours. Hair to be cut short, and the wetted cap applied. Milk and water to drink.

9th. Continues in all respects the same, except that the skin is somewhat cooler.

10th. Wonderfully better; slept much in the night; aspect natural; no heat of face or skin, which is inclined to moisture; tongue moist, and losing its fur; very slight thirst; urine free; bowels open twice since the 10th, and has lost all pains in the head and epigastrium; pulse 76, soft. No further application was ordered.

On the 14th the boy was allowed to sit up, and have meat, and was considered convalescent.

May we not draw the following conclusions from the facts adduced:—

1. That the judicious use of the wet sheet has a powerful influence in relieving many of the most distressing symptoms of fever.

2. That if applied *very early* in the disease, it may in some cases arrest its further progress.

3. That if used *later* in the disease it has a controlling influence, bringing the fever to a termination much earlier than by any other known treatment.

4. That the ordinary complications of fever are no arguments against, but rather for, its use.

5. That with this treatment, weak broths and milk and water, *ad libitum*, may be allowed.

6. That the first symptoms of the subsidence of the fever, were a cool and often moist condition of the skin, a diminution of thirst, and an improvement in the tongue. When these changes occur, the treatment must directly be discontinued, and bark, and better diet be ordered.

7. That some of the worst cases of typhus fever were convalescent and walking about on the fifteenth day from the commencement of the attack.

HISTORY OF TWO CASES OF POLYPUS UTERI.

By EDWARD JOHN SPRY, Esq., Truro, Surgeon to the Royal Cornwall Infirmary.

(Read at the Annual Meeting of the South-Western Branch of the Provincial Medical and Surgical Association, held at Truro, July 16th, 1847.)

CASE I.

M. A. K., aged 43, was admitted into the Infirmary, on the 28th of January, 1847, as a case of menorrhagia, under the care of Dr. Carlyon. She is the wife of a mason residing at Redruth, and the mother of nine children. She says that she enjoyed good health until two years since, when irregular vaginal discharges commenced, accompanied with pain in the back; that about nine months since she was seized with a violent pain in the abdomen, which obliged her to keep her bed for some time, during which she was attended by Mr. Roan, who told her that she had "a gathering in the womb;" that she has since had every few days a profuse, sanguineous, and purulent discharge; that she has found no relief from medicine, and that lately the discharge has been almost entirely sanguineous, and occasionally so profuse as to cause fainting.

February 2nd. Dr. Carlyon being absent, the case fell under the management of Dr. Barham, who, this morning requested me to examine the patient, as he suspected the existence of a polypus, so called. The discharge of blood had been excessive during the night; her countenance was very sallow; pulse 100. I found a large tumour occupying almost the whole of the vagina, attached to the uterus, within the cervix, and although I could not avail myself of Dr. Simpson's valuable uterine sound, I satisfied myself that there was no inversion, and that the tumour grew from the left side of the uterus, midway between the fundus and cervix, in which investigation I found a stout bougie a very useful aid.

12th. At Dr. Barham's desire, I applied a ligature to the neck of the tumour with the double canula, which procedure occasioned little or no pain. The hæmorrhage, which, from the patient's account, was sufficient to fill an ordinary chamber utensil in twenty-four hours, ceased from that moment, and did not return up to the time of her leaving the Infirmary,