

the one form, death mostly takes place on or about the eleventh day; in the other, rarely till after the twentieth; and both may have sequelæ attacking the same organs and tissues. And similar comparisons might be drawn between any two types taken from continued fevers and the exanthems. Although human reasoning cannot say why it is that in one variety the pustulation is in the intestines, in another in the skin, yet accumulated observations have long shown, that between the skin and the mucous membrane of the digestive tract there is a peculiar sympathy, and that between the enteric and variolous phenomena many of the fundamental symptoms exemplify no slight or casual features of resemblance.

Dr. Kennedy, of Dublin, in a paper read a few months ago before the Medical and Chirurgical Society, propounds the doctrine that typhus and typhoid (enteric) are mere varieties originating from the same poison. Dr. Jenner's facts are opposed to this opinion. Of relapsing and typhus I can speak with much certainty. Sixteen years ago I maintained from very elaborate data their distinct essence, and such doctrine still holds good. In more than 1200 cases I never saw typhus and relapsing blended. The infection caught from one fever never produced the other. Like always produced like in a multitude of instances. I have given in my papers thirty-two cases, in which the two forms succeeded each other within a short space of time. Seventeen out of the thirty-two who had passed through the relapsing contracted typhus during convalescence, or within the brief period of three months. The proofs of the non-identity of their essential cause were as clear as the common-sense proofs we have, and as practice ever tells us, of the non-identity of small-pox and scarlet fever. If typhus differs from the relapsing, why may it not differ from the enteric?

With regard to the moisture and cleanness of the tongue, as reported, Louis notices the same. In the 40 cases which he gives, in one-half it remained moist. In typhus, it sooner becomes brown and dry, and sordes are more common. In the relapsing, it is much furred, but moist. There was tympanitis at my first visit. This symptom is, of course, from gas in the colon; and when liquid is there also, gurgling is heard. The absence of diarrhœa accounts for the gurgling never having been recognised. In the enteric form diarrhœa is well-nigh always present. It occurred in 37 out of the 40 cases of Louis; and Drs. Tweedie, Jenner, and Wilks regard its presence as the rule. In typhus, meteorismus and diarrhœa are rare; the belly is generally flattened or drawn in; and harass of the bowels is not spontaneous, but an incidental and seldom-observed circumstance. In the relapsing fever, in 450 cases I found diarrhœa to average 1 in 6.25; but 1 in 1.65, or 10 out of every 16, had urgent nausea or vomiting. When vomiting comes on in the latter part of enteric fever, ulceration of, or a changed condition in, the mucous membrane of the stomach may be suspected. According to Carpenter and other advanced physiologists, the intestinal glands are outlets for the impurities of the blood. If such be the fact, the proneness of the agminate glands to disease in the enteric form can better be accounted for. Rokitsky gives an elaborate account of the pathological changes undergone by these organs in the fever considered. He says there are four stages—one of blood stasis or congestion, a second of typhous process (infiltration of deposit), a third of softening, and a fourth of ulceration. The lower third of the ileum, and around the cæcal valve, are the parts most affected. I remember making many examinations of the digestive tube of patients dying in fever when I was assistant in the pathological theatre at Edinburgh, and such was the fact. These were then regarded as illustrations of *typhus*, the difference between it and the enteric not having then been demonstrated. I never saw ulceration in the intestines of those who died from the relapsing. So long as the typhous dyscrasia continues, thus long will the disease of these glands be maintained. The diarrhœa which ushers in the close of phthisis is accompanied by ulceration of Peyer's patches. I was much struck with the general resemblance of this patient to the appearance of those dying in phthisis. A casual observer might almost have mistaken her affection for that complaint. It is seen that the pulse never fell to the non-febrile standard. From first to last, the skin was never moist, but of dry, harsh feel, and of exalted temperature. The pulse was one day 116; it varied, seldom being exactly the same on consecutive days. Irregularity of the pulse is pathognomonic of the enteric. In typhus, when the pulse reaches 130, the case is generally fatal. In relapsing, the pulse might be exceedingly high without indicating danger. The death of E. G. occurred at a protracted period—the forty-third day. Of twenty-five fatal cases given by Dr. Jenner of typhus, nine

died on or before the fifteenth day—not one after the twenty-second. The same authority gives the twenty-second as the day mostly fatal in typhoid (enteric), and the fourteenth as mostly fatal in typhus. In idiopathic peritonitis, the intellectual faculties keep unclouded almost to the last. The great sympathetics are potently affected, and the proximate cause of death is increasing debility of the central organs of circulation. The fatal phenomena are exerted on the action of the heart. In the enteric fever, the decrease of power in that organ demands watchful attention; the patient sinks from asthenia—hence the imperative need of stimulants.

Some writers on fever have latterly maintained, after much labour touching the etiology of continued fevers, that the enteric is always very intimately associated with some local cause. I do not, however, here enter into that vexed question as to whether malaria can or cannot of *itself* constitute a sufficient cause. I doubt that doctrine. Nor do I agree with Dr. Budd, of Clifton, that the germs of the enteric are always conveyed by the drains. I may here hastily mention that a night-man of this place informed me he had been sixteen years thus occupied, yet never had fever. Again, he added that he could instance the names of a dozen other men who for long periods had thus been employed, but he never knew one to have fever. No one, however, can gainsay the fact of bad drainage being one main element entering into the causation of fevers. The family of the deceased, whose case I have related, came to reside at Tunbridge Wells, six weeks prior to her attack. The cottage in which they live is one of a row of new, well-built houses, thoroughly ventilated, and situated in an airy, open, dry, well-drained street. The rents vary from £11 to £12, and none of the occupants can be classed with the poor. I was astonished to hear of the many cases of fever which from time to time had occurred in these houses, and felt certain of some local cause. I found that at No. 1 a family had resided five years, and four of the inmates had had fever. At No. 2 there had been six fever illnesses in nine years. At No. 3, the husband had fever some few years ago. At No. 4, where the deceased died, a young man was very dangerously ill of the same disease three years since.\* At No. 5, a girl had had fever, and it was reported their predecessors had it. At No. 6, I could hear of no case. At No. 7, two years ago a girl of sixteen, and a boy of twelve, had "low fever;" and, within a few months, a woman of twenty-six had "typhoid fever." I was told it had often been remarked that "fresh comers" took fever. Behind the buildings are seven small strips of garden ground, and in each a privy. From the privies runs a deep drain, through a sandy shale; and within a few feet of this drain is the pump-well. The well-water had long been complained of, and, after heavy rains, it was said to have a bad taste. The town surveyor, who made an inspection, told me he believed it very probable that the matter from the drains might percolate into the well. He recommended the well to be filled up. In the next set of premises is another well, supplying two other houses. I made inquiries, but could not hear of any inmate ever having fever in these two dwellings; but they always used the water from their own pump, and never from the pump common to the seven houses. The chief cause of the diffusion of typhus is destitution; for proof of which I would refer the reader to the records of Scotch and Irish epidemics. In relapsing fever, of 436 cases, 81 were in partial work, and 301 were destitute. The relapsing fever cases at Edinburgh and other large towns in Scotland, were in a less relative proportion in the ground-floor houses, whose occupants were mostly little traders, and in comparatively better circumstances, though, of course, nearer the drains than those above them; but in the upper flats there was by far more poverty, and, consequently, far more fever.

Tunbridge Wells, 1860.

## REPORT OF ELEVEN CASES OF VESICO-VAGINAL FISTULA.

By I. BAKER BROWN, Esq., F.R.C.S. (EXAM.)

CASE I.—*Three Fistulæ; several operations; cure.*—(This and the three following cases are abstracted from the reports of the London Surgical Home, taken by the visiting surgeons.)—"S. P.—, aged forty-five, married, has had eight children and three miscarriages. Her first five labours were pretty good. Her last labour began at half-past twelve A.M. on Thursday,

\* Since this paper was sent to the press, there has been another case at No. 4.

and lasted till a quarter past three P.M. on Friday, April 9th, 1852. She was finally delivered by instruments. Her urine came away per vaginam immediately after the labour. Six months afterwards she was admitted into St. Mary's Hospital, under Mr. Baker Brown. On examination, he found two openings, separated by about half an inch from each other, the upper one near the os uteri. He performed several operations upon her without much benefit. Subsequently she entered the Soho-square Hospital, where the actual cautery was frequently applied. On Nov. 1st, 1858, she was admitted into the London Surgical Home. On examination, Mr. Brown found both the openings much smaller, but the edges very hard, almost cartilaginous. The patient stated that the last doctor under whom she had been, asserted that there were three openings; but at the time, only the two before-mentioned could be seen. Mr. Brown operated on these by Bozeman's plan, excepting that the buttons were placed horizontally instead of transversely, as recommended by him. On the tenth day the buttons were removed, and both openings found to be completely closed; but in a few days she complained that a very small quantity of urine occasionally escaped; therefore, on Dec. 1st, Mr. Brown injected the bladder with tepid water, and then found the water escape (guttatim) through another small opening, which was situated at the very apex of the vagina. Around this was a strong band of adhesion, cutting off, as it were, the opening from the rest of the vagina. This was freely divided, and afterwards dressed with oiled lint and sponge tents. On the 3rd of January, 1859, Mr. Brown endeavoured to close the opening, which had become much larger, using Bozeman's buttons. Four days afterwards she was taken with violent sickness and diarrhoea; nothing relieved her; and the result was, the sutures were entirely torn out. On the 27th, the patient having perfectly recovered and the parts looking healthy, Mr. Brown again operated upon her, and for several days with apparent success; but on removing the button there was still a very minute fistula, through which a small quantity of urine escaped, when standing, but not in the recumbent posture. Her health being very much shattered by long confinement, she left the institution for the purpose of going into the country."

After this, I lost sight of her till June, 1860, when, hearing that she was quite well, I called on her, and found that such was the case. She stated that she had been gradually getting better and losing less and less urine, and for the last three months had been perfectly well.

*Remarks.*—It is evident that the cause of the last opening not healing was the unhealthy condition of the vagina, the parts around the opening being almost cartilaginous, and therefore possessing but very slight powers for healing. It will be observed that this case, prior to admission into the London Surgical Home, was one of those treated before the advantages of silver sutures had been proved.

**CASE 2.**—*Two Fistulae, the larger one cured by one operation, the second by two.*—N. K—, aged thirty, married; resides at Winchester; admitted into the London Surgical Home on the 20th of December, 1859.

*History.*—Has had a child ten months ago; says that she was some hours in labour, the child being very large, but no instruments were used. About nine days after her confinement, she found that she was unable to retain her urine. She then applied to the County Hospital; afterwards she was seen by Mr. Buckell, who recommended her to be removed to the Home.

On examination, two openings were found, one admitting the end of the finger, and the second the end of a No. 10 bougie, with an intervening space not much more than a quarter of an inch. These openings were situated midway between the os uteri and the neck of the bladder.

Dec. 22nd.—The patient being placed on her back in the lithotomy position, under the influence of chloroform, both openings having been pared, were closed by bar clamps, the larger one requiring three, and the smaller two, iron-wire sutures being used.

27th.—An escape of urine. On examination, the clamps on the smaller opening had fallen off, because the wires had ulcerated through, but a part of the opening was found to be healed.

Jan. 1st.—The bar clamps on the larger opening removed, and complete union was found.

19th.—The smaller opening was again operated upon.

29th.—Bar clamps removed; complete union was found.

Feb. 7th.—Discharged quite cured.

*Remarks.*—It is always difficult to cure two openings by one operation; but it is certain that in this instance the cause of

failure was the cutting out of the iron wires; and if silver wires had been used, such would not have been the case. It will, however, be observed, that the cure was effected in five weeks.

**CASE 3.**—*One Fistula; two operations; cure.*—L. R—, aged forty, married, three children; admitted into the London Surgical Home, April 7th, 1860.

*History.*—Eleven years ago she was confined of her first child. The labour did not last very long; but as she had previously been suffering from dyspepsia and debility, she became exhausted. The medical attendant thought it necessary to apply forceps, and a fine boy was born, who however only lived a few minutes. After the confinement, she was very ill; and, about a week later, she found that her urine dribbled away through the vagina, excoriating the parts dreadfully. Since then she has had two good labours, but has always been in a most wretched condition on account of the constant dribbling.

On examination there was found an opening large enough to admit the top of one's thumb midway between the urethra and os uteri, and on the left side of the vagina.

April 12th.—Mr. Baker Brown performed his usual operation, bringing the parts together transversely with five of his bar clamps.

21st.—Clamps removed. On their removal there was found a very small opening, but the rest was healed. Mr. Brown was in hopes that this would heal of itself, as there was a healthy purulent discharge; but as it did not do so, on

May 17th, he again operated in his usual manner, the patient not being under the effects of chloroform.

28th.—Bar clamps removed; no escape of urine.

June 10th.—She left perfectly cured.

*Remarks.*—When it is considered that this patient had been suffering for eleven years, and, consequently, the parts around were much indurated, and that she was perfectly cured in about six weeks, the result must be considered highly satisfactory.

**CASE 4.**—*Vesico-Vaginal Fistula; operation; death from pyæmia.*—Mrs. W—, aged thirty-four, admitted April 18th, 1860, into the London Surgical Home; mother of five children.

*History.*—About three months before her admission she was confined of her last child. The labour was a rather protracted one, and she was attended by a midwife. After the labour she was unable to retain any urine, but gradually improved, and at the time of her admission there was a mere trickling. She was sent to be under the care of Mr. Baker Brown by Mr. Hemming, of Kimbolton.

On examination, there was found a very small fistula at the junction of the urethra with the neck of the bladder, which could hardly be discovered. The opening had originally been much larger, but was now filled up by a very unhealthy loose granulation.

April 26th.—The patient being under chloroform, and in the lithotomy position, Mr. Brown performed his usual operation, three bar clamps being used, with iron-wire sutures. She recovered well from the chloroform; but towards the evening unusual sickness came on, which nothing seemed to allay. This continued till the 30th, when she became delirious, and on May 3rd she died, having been insensible for the last twenty-four hours, the cause of her death evidently being pyæmia.

*Remarks.*—As soon as she was dead, I began to inquire into the cause of so unusual a sequence to the operation. I then ascertained that there was milk in the breasts. This greatly surprised me, as she had assured me that she had weaned her baby some weeks before admission, and she had also led my friend, Mr. Hemming, to the same belief before he sent her to me. Had there been the slightest doubt in my mind on this head, I should never have attempted the operation until every trace of milk had disappeared, because I had long been satisfied on this head by past experience, especially in one case of death from pyæmia, which followed an operation for ruptured perineum, where milk was still in the breasts.

(To be continued.)

ON

## WHAT IS COMMONLY CALLED "RIGIDITY OF THE OS UTERI."

By CHAS. D. ARNOTT, M.D. EDIN., &c.

AMONGST the many causes of delay and difficulty in human parturition, abnormal conditions opposing the completion of the preparatory processes in the maternal passages for the descent of the foetus, are of frequent occurrence. Obstetric writers