beyond what they know. Sure and great results—yet familiar and common, and procured at will and by certain means, but in an unaccountable manner—naturally set us thinking and forming notions how they come to pass; and then it is safest and best to fill up the gaps of our knowledge from analogy. When we are treating a disease, our aim may be to raise the pulse or to lower it, to cool the skin or to warm it, to purge the bowels or restrain them, to augment the secretion of this or that gland or to diminish it or alter its quality; and as our remedies do their appointed work, we witness the whole disease brought to an end. But, when we give cinchona for an ague, we have no single aims; we give it for the whole disease, and the cure follows. Nevertheless, it is according to analogy to believe that it hits a mark of its own, which is more particular than any within the scope of our discernment. Thus cinchona, and all so called specifics, may work after the same manner with other remedies, which are better understood. They may all equally produce their great results by intermediate operations; only in the one case the intermediate operation is seen, and unseen in the other; aimed at in the one, and unaimed at in the other.

From this view of the matter, it would turn out that our distinction between *cure* and *treatment* is not in the nature of things, but in the imperfection of our knowledge.

Further, from the same analogy, we may fairly believe that there is a certain morbid element, of which cinchona is the specific antidote; that it exists most pure and unmixed in ague, but that it may add itself as an accident to other elements whose property is to produce other forms of disease; and that wherever it exists, and in whatever combinations, its power is still predominant, and cinchona is still needed to bring the disease to an end.

These things may be as analogy would suggest. But in practice there is a mischief in conceiving ourselves wiser than we are. Granted that of the many morbid actions and sufferings which make up the disease, one only may be reached and swayed, or annulled, or curatively modified, by the one special remedy; granted, that thus the complex disease may cease by removal of some one main element, and by some intermediate operation of the remedy; but inasmuch as we know no such element of the disease, and see no such intermediate operation of the remedy, they must be to us as if they did not exist. We cannot construct aims and indications of practice out of hidden things, but must be content for the present to regard the whole disease as a single comprehensive indication, and so prescribe for it the single remedy and expect the cure. We shall perhaps know better some time; but no good will come from our pretending to know better now. Patience under imperfect knowledge is no proof of an unwise mind.

MEDICAL REFORM IN AUSTRALIA. The new Medical Bill begins to put the doctors on the *qui vive*. Several of them have taken down their plates, and those who do not happen to possess diplomas, have substituted the word "Medical Institution, etc."; but not one has ceased to practise. The Medical Board lately refused to register an American diploma, obtained by a gentleman who was in the colony at the time it was bestowed. (*Australian Medical Record*.)

Lecture

ON

VESICO-VAGINAL AND RECTO-VAGINAL FISTULA.

DELIVERED AT THE SAMARITAN HOSPITAL,
MAY 24TH, 1861.

BY

T. SPENCER WELLS, F.R.C.S.,
SURGEON TO THE HOSPITAL.

GENTLEMEN,—During the last few years surgery has made great progress in various directions. Joints are now excised, and useful limbs preserved, where amputation would have been formerly the unhesitating sentence. Cripples who were left to endure hopeless deformity are now easily restored to happiness and vigour by tenotomy and mechanical after-treatment. Hernia, generally left to the palliative relief afforded by the truss-maker, may now be cured radically by the surgeon. Lithotomy is, in a considerable proportion of cases, safely performed in place of the more hazardous operation, lithotomy. All the ill effects of ruptured perineum and prolapsus uteri are relieved with certainty by a simple plastic operation. Women are no longer allowed to die, worn out by hopeless long-suffering, because they have a diseased ovary; they are restored to health and happiness by ovariectomy. We are reducing the rate of mortality after all operations by securing to all our patients the freest possible supply of pure air and pure water, sufficient light, wholesome food, and clean clothing and bedding, thus avoiding the two greatest enemies of the surgeon—fever and pyæmia. And we have taken another step in the same direction, by substituting for silk or hempen ligatures and sutures, which become receptacles for decomposing and poisoning fluids, the metallic needle or the wire of silver or iron; while, thanks to chloroform, all surgical operations are now painless.

But of all the triumphs of modern surgery, the cure of vesico-vaginal fistula is perhaps the most brilliant. Ten years ago, most surgeons believed this distressing condition to be incurable. At long intervals one heard of a case successfully treated by caustics or the cautery, or of a spontaneous cure after sloughing and cicatrization; and occasionally, though very rarely, a cure was obtained by surgical operation. I believe I had been quite as fortunate as other surgeons, having had successful cases both after cautery and the suture between 1845 and 1853. I and my colleague Dr. Savage had each a case in which a small fistula healed after a single silk stitch. I had tried the lead-wire suture, after Dieffenbach; the hare-lip pin suture, after Wutzer; and various forms of silk and metallic sutures, with some encouragement, but I failed after several operations in some cases which I feel confident I could cure now at a single trial. I believe other surgeons were much more discouraged than I was. Many openly expressed their disbelief in the possibility of cure, and attributed the success in cases they could not deny to "luck".

Lecturing thirty years ago (*Lancet*, June 23rd,

1828), Mr. Liston said:—"It was seldom that union took place. All, indeed, might appear to go on well for eight or ten days; but at the expiration of that time the wound probably would be found to have been enlarged by having been interfered with, and would become larger and larger every time the attempt at cure was made. When the communication is to a large extent, but little hope remains to the patient."

So in 1844, Dr. Churchill wrote in his *Diseases incident to Pregnancy and Childbed*:—"In the majority of cases, I fear we shall find but little benefit. Indeed, vesico-vaginal fistula has long been considered as one of the *opprobria* of surgery, and, with some exceptions of late years, the cure has been given up as hopeless." (Churchill, 1844.)

This is but a recurrence to the opinion of Smellie, published now nearly a century ago, who said (*Midwifery*, vol. i, p. 386):—"If the opening is large, close it with a double stitch (the edges of the wound having been refreshed), keeping the flexible catheter in the bladder until it is entirely filled up. I wish this operation may not be found impracticable." (Smellie, 1766.)

Diefenbach's graphic account of his own disappointments may be taken as representing the feeling of most surgeons ten years ago. In his *Operative Surgery*, published in 1845, he writes, that all he has said about vesico-vaginal fistula he has learned "bit by bit" from innumerable cases. "I was once delighted to find a fistula extending along the whole roof of the vagina healed in eight days; and I was filled with hope that I was at last able to conquer the enemy at all times; but then I was again defied by a mere needle puncture remaining after an operation otherwise most successful, or a fistula of the size of the head of a probe resisted the most persevering efforts. I saw openings of the size of a small pea, after the use of the suture or the cautery, attain the circumference of a large pea; an opening of the size of a silver penny became as large as a two-penny-piece; one, of a threepenny-piece, as large as a sixpence; and then I stopped. I operated on one woman eighteen times, and did not cure her after all. I collected whole wards full of these unhappy creatures from all parts of the country, and gave up a great deal of time to them, quite liking the trouble, and yet I cured but very few. Two died of cystitis or peritonitis; and one even after suture had led to a complete cure of the fistula."

To show how little faith some surgeons had in any operative treatment of vesico-vaginal fistula, I will just add that Mr. Syme, in the last edition of his *Principles of Surgery*, published in 1856, does not even allude to the subject. Mr. Fergusson, in his last edition (1837), only gives one line to it; and Mr. Skey, in the second edition of his *Operative Surgery*, published a year later (1838), describes an operation for recto-vaginal and recto-vesical fistula, but does not say one word about vesico-vaginal fistula. I am not saying this to find fault with these teachers. I simply wish to remind you how very recent are the improvements which are now so generally accepted by the profession.

It is from 1852 that what I will call a new era in surgery must date. It is quite true that metallic sutures had been used long before that year. Putting aside all reference to hare-lip pins, and to the entomology pins so largely used in other plastic opera-

tions (where the surgeon looked to the support the pins afforded, and the opportunity they give of making lateral pressure upon the opposed surfaces of the wound, rather than to any superiority in metal over hemp or silk), it is well known that Mr. Gossett cured a vesico-vaginal fistula in London as early as 1834 by the use of a suture of gold wire. But his example was not followed. He was even ridiculed for supposing that the material of his suture could have had any influence on the result. So in 1840, I heard Mr. Morgan, at Guy's Hospital, lecture on the Uses of Platinum Wire as a Suture, and illustrate the non-irritating effects of metal by reference to the manner in which ladies' ears bear ear-rings. But his example was not followed to any extent, either by his colleagues or his pupils. Diefenbach had been showing how successfully lead-wire replaces silk in many cases; and I applied this wire in cases of vesico-vaginal fistula in 1852 and 1853. Early in 1855, I operated upon a patient of Dr. Simpson's in the Edinburgh Infirmary, and intended to use lead-wire; but an accident put the needle out of order, and I had to trust to silk. Mettauer, of Virginia, also advocated Diefenbach's suture of twisted lead-wire; but it was left to Sims, of New York, to make known, in 1852, the great use of silver-wire sutures; and to Dr. Simpson, to impress upon the mind of the profession the principles upon which the superiority of metallic over silk and other absorbing materials is established. Next to his discovery of the use of chloroform, I think his exposition of the use of metallic sutures is the best of the many gifts for which medicine and mankind have to thank this great man.

Before passing on, I may as well show you Diefenbach's suture of twisted lead-wire, as it may serve for a magnified view of the essential part of the suture now used with silver or iron-wire in curing

Fig. 1.

vaginal fistula. Here is a piece of soft lead-wire, which I got from Diefenbach's own instrument-maker in Berlin. This was the size he used; and you see how easily it is fastened by a simple twist. (Fig. 1.) I have tried a variety of needles for passing it, but I found none answer so well as this curved needle made for me by Mr. Blaise, with an open shaft, into which the lead-wire is easily twisted. (Fig. 2.) But this suture is chiefly interesting in an historical point of view. It has now been quite superseded by silver and iron.

In addition to the introduction of metallic sutures, various modes of fastening and covering them, and of keeping the united surfaces immovable, were also promulgated. I shall allude to some of them presently, although they are now almost disused; and I shall also show you all that is good and useful in various contrivances for exposing the

Fig. 2.

fistula, and paring its edges. But before doing so, I must just allude to one other *principle* upon which success depends. I am not quite sure whether it was Dieffenbach or Jobert who first exposed the error of former operators; but they both insisted upon (what we now wonder could ever have been overlooked) the importance of not cutting away any of the mucous membrane of the bladder in paring the edges of the fistula; and they also showed that if this membrane were perforated by the sutures, the track of each suture would become a new fistula. Hence the obvious rule to carry the sutures *close to*, but not *through*, the vesical mucous membrane; and in paring the edges to spare this membrane. In order to get as broad a surface as possible for adhesion, most recent operators pare the edges in an oblique direction—*bevel* them. You will see at once by this diagram how the edges of a fistula may be pared without enlarging the opening from the bladder.

Fig. 3.

Let *E C* represent the vesical, and *D B* the vaginal, opening of a fistula. By paring from *A* to *C*, a larger raw surface is obtained than by cutting from *B* to *C*; while the opening *E C* is not enlarged.

Some operators (Langenbeck some years ago, and more recently Mr. Collis of Dublin) have avoided cutting away anything from the opening, and have obtained their raw surfaces by splitting the border, or separating by horizontal incision the vaginal wall or surface from the vesical wall or surface; in other words, separating the vaginal from the vesical portion of the vesico-vaginal septum. Then, turning the vesical portion of the raw edges towards the bladder, and bringing the vaginal portion downwards, a large raw surface is obtained without cutting away a single shred of tissue. I have adopted this method occasionally; but when the margins of the fistula are hardened, or otherwise much altered from their natural condition, I think it is better to cut them away. But, whatever plan you adopt, you must bear in mind these two principles:—

1. In paring the edges of a vesico-vaginal or a recto-vaginal fistula, and in passing the sutures afterwards, to spare the mucous membrane of bladder or rectum, and make a broad raw surface;

2. In uniting the raw surfaces, to bring them into close apposition by metallic sutures.

This being granted, we may now proceed to consider in detail how these principles may best be carried out. We will suppose that, by a preliminary examination, the exact size, position, and relations of the opening have been made out. An ordinary examination, with one finger in the vagina and another in the rectum, or with a catheter or uterine sound in the bladder, often suffice for this. But occasionally it may be necessary to see as well as feel the opening; and then the rules as to the position of the patient, and the exposure of the opening at the time of operation, apply to the preliminary examination.

[To be continued.]

Illustrations

OF

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

ST. GEORGE'S HOSPITAL.

STRANGULATED FEMORAL HERNIA ATTENDED WITH OBSTINATE CONSTIPATION.

Under the care of T. HOLMES, Esq.

[Reported by EDGCOMBE VENNING, Esq., Surgical-Registrar.]

MARY E., aged 63, widow, was admitted June 29, 1861. She complained of having prolapse of the uterus every month; at which time she always suffered from violent vomiting. On this occasion vomiting commenced on June 27, at which time there was prolapse of the uterus. On the evening before admission, the surgeon under whose care she was for the vomiting, finding it become so much worse, examined the femoral regions, and in the left found a tumour. During the previous attacks of vomiting, she said, she had felt a sensation as if something descended in this region; but immediately returned. The taxis was applied prior to admission; but, finding that the tumour remained in the groin, although diminished in size, and that the symptoms were not relieved, the surgeon sent her here.

On admission, there was a small tumour, elastic, and with an obscure sense of fluctuation in the left femoral fossa. The lump appeared too deeply situated for a gland; there was tenderness on pressure in the belly; and she had vomited on her road to the hospital. Pulse 88, sharp. The bowels had not been relieved for two days prior to admission. A consultation was held, and it was determined to cut down upon the tumour. A considerable quantity of fat was found, evidently subperitoneal, as it passed beneath Poupart's ligament; and in its meshes was a small sac containing a small quantity of fluid; but no intestine or omentum. The femoral ring was quite free, but a little enlarged, admitting the end of the finger beneath Gimbernat's ligament.

June 30. There was a great tendency to vomiting, and a considerable amount of pain on pressure in the abdomen for about two inches from the wound. She was ordered low diet, with effervescing drinks.

July 1. There was a decided improvement. All sickness and pain in the abdomen had left her. The bowels had not yet acted.

July 2. There was some little amount of pain to-day on pressure. The tongue was brown and dry. Pulse soft, 84. There was no action of the bowels.

July 3. There was some redness and swelling to-day extending over the region of the iliac fossa. Tongue brown; pulse 92. The wound had been laid open freely, and a good deal of decomposing clot of blood evacuated. This had proceeded from a large vein which crossed the wound.

July 6. The tongue was cleaning rapidly; and she had no pain in the abdomen on pressure. There was no action of the bowels.

July 7. There was some redness over the sacrum. A boil seemed to be forming in this region. A generous diet was ordered to-day.

July 11. The patient complained of head-ache. Tongue brown and dry; pulse 104. She had some pain on the left side of the abdomen. There was still a good deal of discharge from the wound.

July 13. As this was the fifteenth day since there had been any action of the bowels, and as there had been some griping pain in the abdomen, a small dose of castor oil was administered; and the bowels were