CONTRIBUTIONS TO PLASTIC SURGERY.*

By MAURICE H. COLLIS, M.D. Dub., F.R.C.S.I.,

Surgeon to the Meath Hospital and County Dublin Infirmary; Examiner in Surgery to the Royal College of Surgeons in Ireland; Chairman Irish Medical Association.

I.—VESICO-VAGINAL FISTULA.

I PURPOSE making a few remarks upon some improvements in this branch of surgery, which have from time to time suggested themselves, or been suggested, to me in the course of an experience now reaching over a quarter of a century.

The use of anæsthetics has given an especial stimulus to this department of surgery; but yet, as will be seen, full benefit has not been drawn from them hitherto in this country. Still, it was not until chloroform and ether had given both surgeon and patient adequate courage, that operations requiring a long period for their performance, and otherwise entailing much suffering, were undertaken to any extent.

The first branch of plastic surgery to which I now wish to draw attention, is that which deals with fistulæ connected with the vagina and the bladder or rectum. These have been treated by cautery, by suture, and by transplantation of flaps. To the various methods I have contributed one, which has proved not unsuccessful in my hands, and in those of others who have taken pains to master its details. I got the idea from Pancoast, an American surgeon, and author of a work on Operative Surgery. He describes a plan by which he treated a vesico-vaginal fistula successfully. It is briefly as follows. He pares one side of the fistula so as to make it wedge-shaped, stripping it of its mucous membrane, both on vesical and vaginal surfaces. The opposite side or margin of the fistula is split so as to form two flaps, one vesical and the other vaginal; the raw surfaces, when undisturbed, lying in contact. Between these two flaps, the raw wedge-shaped margin on the opposite side of the fistula is pushed and held by sutures. This sort of dovetailing of the flaps seemed to me an ingenious and happy method of increasing the amount of raw surface, and so, of increasing the chances of union.

I had not been long acquainted with this method, when I chanced to meet a case of vesico-vaginal fistula which seemed to me capable of cure. It was the first I had seen; for at this date (1856) they were looked upon in Dublin as incurable. At least, the success was so slight, that men had given up trying any plastic operation for their cure. If a touch of the cautery would close them, well and good; but if the size were too great for that, they were dismissed as incurable.

The method I adopted in my first case has since become known in foreign parts as Collis's method. It is, however, simply a modification and improvement on Pancoast's. I split the margins of the fistula all round to an extent of at least half an inch. This incision of the mar-

Fig. 1.

gins must always pass well through any tough cicatricial tissue, and reach sound areolar tissue. If this point be not attended to with great care, the operation will fail. Having split the margins, I now insert a sufficient number of quilled sutures (Fig. 2), and, on tying the loose ends with a moderate degree of tightness, the flaps open up, and a very large amount of raw surface is made available for union.

Fig. 3 shows the position of the quills and margin on the stitched or vaginal aspect.

Fig. 4 is a sectional view, showing not only the position of the parts depicted in the previous figure (3), but also the mode in which the vesical flaps adapt themselves to one another; also, the position of the quills and sutures.

This mode of treatment has succeeded well in my hands, and in those of Dr. Kidd and other friends. The result in my own practice is thirteen cases and nine cures.

The advantages of this method are—1. There is no loss of tissue, as in paring operations. 2. There is a very large amount of raw surface compared to any paring operation. 3. The flaps towards the bladder will often unite, while the vaginal flaps may fail to unite, either from suppuration or ulceration. Even when the vaginal flaps have been allowed to slough off from undue tightening of the sutures, union of the

vesical portion has taken place. 4. These flaps act also as valves to prevent the access of urine to the wound.

I would only add, that the length of time I leave the sutures uncut

Fig. 2.—Inner dark line shows margin of fistula. Dotted line shows extent of dissection.

depends on the extent and the toughness of the flap. It will vary from the third to the sixth day. I keep the bowels quiet with moderate doses

Fig. 4.—a. Section of quills and position of suture when tied. b. Vaginal flaps. c. Vesical flaps. d. Vesico-vaginal septum.

* Read in the Surgical Section before the Annual Meeting of the British Medical Association in Oxford, August 1868.

of opium. I keep a catheter in the bladder for forty-eight hours; and I generally place a piece of soft sponge in the vagina to support the

sutures, just enough to assist in making a moderate pressure on the bladder, and keep it from much movement. I may add, that I have often resorted with success to this method when other methods had failed.

[To be continued.]

ANCIENT TRACES OF ANTISEPTIC TREATMENT IN MEDICINE AND SURGERY.

By GEORGE F. ELLIOTT, M.D.,

Physician to the General Infirmary, Hull.

At a time when the antiseptic treatment of both local and constitutional diseases is justly looked upon with favour, I hope to interest your readers by showing that some of our ancestors were in the habit of using and appreciating the value of antiseptic remedies, although they may not have given them with the same views of the etiology of certain diseases as are generally entertained at the present day. By antiseptic treatment in surgery, it is scarcely necessary for me to say that I allude to Mr. Lister's treatment by carbolic acid. As regards the practice of medicine, I may explain that I allude particularly to the treatment of zymotic diseases by the sulphites, as proposed some years ago by Professor Polli of Milan.

In turning over some of the many old works in our Infirmary library, I recently found a curious and interesting book, entitled *A Treatise on Alkali and Acid*, by John Colbatch, M.R.C.P.; published in London in the year 1698. This Dr. Colbatch appears to have been in practice in London at this time, and was previously on service with the army of William III at the siege of Namur; indeed, he says it was during his leisure moments on this service that he composed the treatise to which I allude. He was a man, I think, considerably in advance of his time; and he appears to have incurred a good deal of enmity for what were then unorthodox opinions; to which enmity he makes the following graphic allusion: "He that would pass the course of his life without envy, must believe what is generally believed, and speak as others do; and whoever takes upon him to do otherwise, let the success of his undertaking be what it will, the reward he is like to meet with from the generality of mankind, is to be reproached". I have said that he was in advance of his contemporaries, because he appears to have anticipated some recent conclusions as to certain properties of the blood in health and disease; for instance, he distinctly states that a volatile alkali can be obtained from the blood; also, that he believes this alkali to be increased during fevers, and that, by its excess, it breaks up the blood-corpuscles; and, looking to this alkalinity of the blood, he strongly recommends the administration of acids in fevers. Among the acids he speaks of, is one which bears particularly on the question of antiseptic treatment. I mentioned Professor Polli's recommendation of the sulphites, the active agent of which, sulphurous acid, has found a place in the *Pharmacopœia* of the present day. Now, Dr. Colbatch alludes to this preparation under the name of "gas sulphuris"; and gives directions for preparing it by, as he describes it, "impregnating water with the volatile acid steams of sulphur"; and thus he makes a compound differing only as to the manner of its preparation from the present pharmacopœial one. After enumerating many diseases in which he has found it of benefit, he thus finally sums up his opinion of it. "This medicine, given liberally in malignant fevers, has done wonders, even where people have been given over as dead. It is an excellent medicine, being taken by way of prevention in infectious seasons; and I think, if any medicine deserves that name, this doth deserve to be called the true prophylacticon." I am not prepared to go as far as our author in the way of eulogium concerning this medicine; but I may here say, that I have lately been using it in typhoid fever, and in cases of diarrhoea suspected to be due either to tainted water or unhealthy emanations, and I have reason to speak highly of it.

Appended to this *Treatise on Alkali and Acid*, was another entitled the *Noëum Lumen Chirurgicum*, setting forth the virtues of a certain vulnerary powder. I regret that I have not been able to find out the composition of this (for certain reasons he says he kept it secret for a time); but, among the other virtues he claims for it, is that of being a powerful styptic. Trivial as reference to a matter of this sort may, at first sight, appear, it will however, I think, be granted that, in connection with the question of antiseptic treatment, the following passage is of much interest. Speaking of a wound which had been dressed with this powder, he says: "About four days after (*i.e.*, the first application), the wound was opened again to make a fresh dressing, which we found in a very good condition, and not in the least digested, or brought to suppuration; but a thin serous matter a little tinged with redness, which I suppose to be discharged out of the glands and lymphatic vessels, came away, which, when it had lain some time upon the dressings, was subject to

stink; but that which came fresh out of the wound was as sweet as a rose." Now, *minus* the otto of rose part of the question, which we may pass over as a bit of pardonable enthusiasm on the part of our author, there is a remarkable similarity between what he claims to be the result of the application of this powder, and that which is attributed to the use of carbolic acid. There is no evidence as to what he supposed to be its *modus operandi*; but what I wish particularly to point out is this, it is evident that he attributed its good effects to the prevention of suppuration. Moreover, he elsewhere in the book ridicules the system then prevalent of keeping wounds open with tents, and dressing them with stimulating applications, in order to facilitate the expulsion of peccant matters.

Such are the foreshadowings of antiseptic treatment evident in the practice of one of our profession nearly two hundred years ago.

CASE OF TRANSVERSE FRACTURE OF THE PATELLA, WITH BONY UNION.

By D. DYCE BROWN, M.A., M.D.,

One of the Medical Officers of the Aberdeen General Dispensary, and late Assistant Professor of Materia Medica in the University of Aberdeen.

THE interest of the following case lies, not in the nature of the injury, which is common enough, but in the rarity with which bony union occurs after a transverse fracture of the patella.

William Wishart, a dispensary patient, aged 40, a butcher, given to drinking habits, had been unfortunate enough previously to have had four separate fractures of the leg, two in each. On coming home on the evening of December 17th, 1867, in a state of intoxication, he fell on a stone stair upon the front of the right knee. The swelling round the right knee-joint was so great that nothing in the shape of a patella, or other part of the knee-joint, could be distinguished. There was great tenderness, with much discoloration and ecchymosis. The limb was raised gently on a pillow, arnica lotion applied, and over the latter a linseed-poultice. This treatment gave considerable ease, and assisted in the reduction of the swelling. When the swelling had sufficiently fallen to enable one to handle the limb without pain, and to distinguish the parts, it was evident that there was a transverse fracture of the patella. The state of parts was as follows. The movement of the limb, as a whole, was wonderfully good. He could bend the leg at the knee, and, with a little difficulty, could raise the limb unbent for a few inches off the pillow. When the limb lay extended, and resting on its posterior surface, hardly any depression could be felt with the finger between the fragments. On bending the knee, the depression between the fragments was about a finger's breadth; the width of the depression varying as the limb was flexed or extended. When the limb was extended, the fragments lay in such close apposition that, without at all pushing them towards each other, distinct crepitus could be made out on moving the fragments from side to side. The case was seen at this time by Dr. Alexander Ogston, who satisfied himself on the above points.

By way of treatment, I first applied two broad strips of diachylon plaster, heated in hot water so as to make them lie to the shape of the parts to which they were applied. The one was placed with its middle part pressing as firmly as possible against the inferior edge of the lower fragment; the ends being then drawn tightly up, and made to adhere to the sides of the thigh; while the other piece of strapping was put in the reverse position, its middle portion pressing as firmly as possible against the upper edge of the superior fragment, with the ends pulled tightly down, and made to adhere to the sides of the leg; the two pieces of strapping thus crossing one another in a horse-shoe shape. This appliance seemed to keep the fragments in close apposition. This being followed by no additional swelling, in two days I put a pasteboard splint behind the limb, from the middle of the thigh to near the ankle, and bandaged it from the toe upwards to the middle of the thigh, making each turn of the bandage about the knee press as much as possible on the upper and lower edges respectively of the two fragments.

After a month all but two days, the bony union seemed fairly firm. I therefore put on a gum and chalk bandage, and let him get up. In a month longer, the stiff bandage was removed, the bony union being then strong. The superior edge of the lower fragment was very slightly raised above the level of the inferior edge of the upper one, which gave, at first sight, the feeling of a slight depression still remaining. On more careful examination, however, there was evidently no depression, but merely the slight difference in level just mentioned. I read the case before the Aberdeen Medico-Chirurgical Society, and brought up the patient to be seen. Those gentlemen who saw him were satisfied that the union was bony and complete.

In this case, everything was in favour of bony union; and the com-