REMARKS ON STRICTURE OF THE RECTUM.

By W. R. WHITEHEAD, M.D. PARIS, DENVER, COLORADO, U.S.A.,
Ex-President of the Colorado State Medical Society; late Professor of
Anatomy in the Medical Departments of both the State
University of Colorado and of the University
of Denver, etc.

At the time of my first paper¹ on Fibrous Stricture of the Rectum, I endeavoured to review carefully the literature of this subject, and, among numerous publications noticed, the paper of Gosselin² received my most thoughtful consideration, and, indeed, enabled me to prepare the way for the ready acceptance by American surgeons of the part which chancroidal ulceration of the rectum plays in the causation of rectal strictures, which, except those of cancerous origin, occur almost exclusively in women, as the result of the extension of chancroidal ulcerations to the rectum; and the persistence of these ulcerations in the ampulla of the rectum finally causes stricture. The auto-inoculable character of the chancroidal pus explains the facile transmission and presence of chancroids in the rectum of women. The secretions of the vagina and vulva, mixed with chancroidal pus, escape and trickle down about the anus in women while in the recumbent position; and hence the liability of women to chancroids about this orifice. The extension of a chancroidal sore from the anus to the ampulla of the rectum is easily effected, and chancroidal ulceration of the rectum occurs; and this disease is indefinitely prolonged, until the chancroidal virus in course of time loses its virulent contagiousness, as it may do elsewhere. The ulceration of the rectum, however, continues, and ultimately results in stricture of the rectum, which from this cause is common, and occurs almost exclusively in women; while from simple ulcers, or cancer, rectal stricture is rare; and from syphilis, as gummy tumours of the rectum, altogether exceptional.

I have no knowledge whatever of child-bearing as a cause of rectal stricture. As for the "kink in the gut" cited by Mr. Harrison Cripps,³ and alleged by him to be due to "contraction of that portion of the pelvic fascia which runs around the rectum," occurring, as he says, generally after the fourth confinement, or after a difficult one, followed by pelvic cellulitis, this is an explanation of the cause of stricture of the rectum that, I confess, I cannot readily accept. It is easy to perceive that a pelvic cellulitis may by pressure obstruct the gut, and that an extensive chancroidal ulcer of the rectum may cause a limited pelvic inflammation, which would slightly displace the rectum to one side; and, in fact, the evidences of an old pelvic cellulitis at a *post-mortem* examination complicating stricture should not be taken as proof that the cellulitis was the cause of the stricture.

Tripiet, of Paris, was probably the first to apply electrolysis to the treatment of urethral strictures, and Dr. Robert Neuman, of New York, and myself were probably the first to use electrolysis in the treatment of rectal stricture. Dr. Neuman's case had fecal fistulæ, and died, and I had an opportunity of examining the specimen at a meeting of the New York Pathological Society. It was after seeing Dr. Neuman's case that I, then living in New York, with the valuable co-operation of Dr. William B. Neffel, treated a case of stricture of the rectum by electrolysis, which is reported in the *American Journal of the Medical Sciences* at considerable length.

The electrolytic treatment of this case extended over a period of one month, and during this time Dr. Neffel subjected the patient to four *séances* of electricity, each one lasting about half an hour. At the first *séance* an application was at first made with a Curt-Mayer (platinum zinc) battery. The cathode, made for the purpose, was introduced partially into the stricture and there was a rapid dilatation of the lower part of the stricture only. At the second *séance*, a week later, the box of Remak's battery, containing Siemens' elements, was substituted for the Curt-Mayer battery. Dr. Neffel began with two elements, and gradually increased to fifteen, at which number the current was maintained for five minutes, with a deflection of the needle of the galvanoscope of fifteen degrees. The current was then gradually, by the addition of one element at a time, increased to twenty-one elements, which was used during five minutes. It was then interrupted, and I examined the upper part of the stricture with my finger, and found it considerably dilated. The applications were several times renewed. At the third and fourth *séances* about twenty of Siemens' elements were used, and considerable frothy mucus, caused by the evolution of hydrogen gas at the cathode, issued from the rectum. Some months afterwards

the patient came to the North-Western Dispensary, and was carefully examined by my clinical assistant, and the stricture was found to be quite as tight as before the electrolytic treatment.

UNUSUAL FORM OF OBSTRUCTION OF THE LARGE INTESTINE: COLOSTOMY: DEATH: NECROPSY.

By LAWFORD KNAGGS, M.A., B.C.CANTAB. F.R.C.S. ENG.

J. C., aged 63, had been treated for varicose eczema of both legs some months ago. Besides this he could only give a history of two attacks of illness, fifteen and twenty years ago, said to be "inflammation of the bowels." Each attack lasted two days, and was accompanied by diarrhoea. For some months he had suffered from occasional abdominal pain, for which he had taken brandy. The bowels had acted naturally. From about November 30th to December 20th he suffered from discomfort after meals, with abdominal swelling. The bowels acted daily in this way. On rising he used to have a cup of tea; this gave rise to pain, and within twenty minutes the bowels would be moved three or four times. The first portion was nearly always solid, small in quantity, and of the thickness of the little finger. This was followed by a quantity of watery motion, which was the chief characteristic of the succeeding evacuations. The bowels would be moved again in the afternoon. He had not lost flesh. On December 20th, after a meal of veal pie and mince tart, he had a severe attack of pain and diarrhoea. This had stopped on December 21st, when he was seen for the first time. There was then an unsymmetrical enlargement of the abdomen. The right side was markedly more distended than the left; the umbilicus was drawn to the right of the median line, and there was considerable distension in the region of the cæcum and ascending colon. There was resonance all over and in the flanks, and no fluctuation. Below the tips of the eighth and ninth ribs on the left side, there was a more marked feeling of resistance than elsewhere, the resonance was impaired and the spot was tender. Pain, when present, was felt chiefly in the epigastric and left hypochondriac regions. The rectum was empty; the prostate was large. There was no sickness or nausea. The pulse was 72; the temperature was normal, and the tongue moist, clean. The urine of specific gravity, 1028, contained amorphous urates and no albumen.

Treatment by opium, belladonna, and enemata was tried without benefit; the patient was much worse on January 3rd, and on the following day the colon was opened on the right side; only a little flatus escaped. Some water was injected through the opening; this was returned, and with it some feces. On inserting the finger, the bowel felt capacious, and soft feces could be felt. Soon after the operation he began to pass blood-stained mucus and small clots from the anus in considerable quantity; this continued for thirty-six hours, and the latter part of the discharge had an exceedingly foul odour; a piece of feces, two or three inches long, of small calibre but natural appearance, was also passed. Whilst this discharge was going on from the anus, a fair-sized healthy, natural-smelling motion was passed from the loin; there was no mucus with it.

On January 6th all discharge from the anus had ceased, and all subsequent evacuations were healthy and passed by the loin. As a result of the operation the abdomen became flaccid, the patient looked better, and felt more comfortable. His difficulties began when he commenced to take food. Distressing vomiting and hiccup could only be controlled by subcutaneous injections of morphine and atropine, and he was supported entirely by rectal feeding for four days.

On January 8th he began to take small quantities of food; but bedsores had already made their appearance on the sacrum, on the back, the malleoli, and the outer side of the feet. Laying him on his side for a few hours produced a long, raised, red wheal corresponding to the line of the femur. The wound, which had appeared to be doing very well, was now found to have made but little progress towards repair, pus making its way to the surface by the sutures; some of these were removed and the wound allowed to gape; pus had collected in the deeper parts of the wound, but neither the temperature nor the external appearance of the wound had given any clue to it. There was slight transient jaundice, and the urine, which was very dark-coloured, on one occasion contained albumen. This also disappeared. The patient slowly sank and died on January 13th, ten days after the operation.

Necropsy.—Permission to examine the cause of the obstruction only could be obtained. On opening the abdomen the large bowel was

¹ *American Journal of the Medical Sciences*, January, 1871; see also July, 1872.

² *Arch. Gén. de Méd.*, vol. v. 5ème série 1854, p. 666.

³ *BRITISH MEDICAL JOURNAL*, December 18th, 1886, p. 1219 (Report of meeting of the West London Medico-Chirurgical Society).

traced from the cæcum to the rectum. The small intestine, which was perfectly healthy, was removed, and it was then found that there were numerous thick and strong adhesions between the liver, the diaphragm, and the adjacent viscera. The hepatic flexure of the colon was also adherent. At this point the colon formed an acute bend, and for a short distance the adjoining parts of the ascending and transverse colon lay in close contact. A strong rounded band that joined the transverse to the ascending colon at a point where they began to diverge was evidently the cause of the acute bend. The colon below the hepatic flexure contained a fair amount of feces and was of somewhat small calibre. Its mucous membrane was pale and healthy. The small intestine as far as the ileo-cæcal valve was also healthy; but the cæcum and ascending colon had evidently been subjected to great distension. The diameter was three or four times that of the transverse colon, and its mucous lining was thickened, injected, and covered with a layer of mucus, which had a very offensive smell. There was no ulceration. The inflamed faded gradually into healthy mucous membrane at the hepatic flexure. The liver was small and very flabby. On section it resembled somewhat the lobular appearance of a pancreas, and was of a brownish-red colour. It did not feel tough like a cirrhotic liver. The gall-bladder was healthy, but the adhesions affected it as well as the rest of the liver. The kidneys were slightly congested, but otherwise healthy. There was no recent peritonitis. There was a little clear fluid in the pelvis. The perihepatitis and the band described were the only evidences of old peritonitis that were found.

The figure is a diagrammatic sketch of the specimen after its removal, and so arranged as to demonstrate the position of the band.

Site of adhesion to liver

REMARKS.—The immediate cause of obstruction was without doubt the distension taking place above the acute bend at the hepatic flexure, and the band described was the means by which this had been produced.

The interference with the peristaltic function of the bowel that must have resulted from the adhesion to the liver, and the fixation of this portion of the colon in an acutely bent position, favoured the production of obstruction. This is a well-marked instance of that class of case in which obstruction occurs without any occlusion of the lumen of the bowel existing. Though the conditions must have been in existence for a long time, there is nothing in the history to suggest that they had given rise to any trouble till the end of November, and the absence of any hypertrophy of the muscular coats of the bowel above the obstruction, and the evidence that the distension, which was considerable, extended only to the ileo-cæcal valve, both point to a recent origin. It is likely that the cold he contracted led to some irregularity in the action of the bowels, and that the ascending colon becoming loaded produced a partial obstruction sufficient to lead to an accumulation of the intestinal contents, but capable of easy relief.

The diarrhoea produced by the indigestible meal in all probability led to greater distension and a more pronounced obstruction. Had the patient recovered, the feces would almost certainly have resumed the natural passage, and the opening in the loin would have closed, or must have been kept patent in case a similar state might again arise. The category to which this case belongs is rather doubtful. Taking Mr. Treves's classification (*Intestinal Obstruction*, p. 97), it might be included under the heading either of "occlusion by adhesion retaining the bowel in a bent position," or of "obstruction by matting of the bowel." In the latter division Mr. Treves refers to cases in which a portion of the transverse colon has been found adherent to the ascending colon along its whole length. Such cases are the nearest parallel to this particular condition that I am aware of, but as cases of this nature are rarely alike, it is not to be expected that an exactly similar one could be found. Would abdominal section have been a better operation than colotomy? It is true the band might have been found and adhesions separated, but they were so deeply situated and so obscure, that it is quite possible that they might have been overlooked; and in these days, when exploratory abdominal section is sometimes followed by colotomy, it is not unlikely that that course might have been adopted when the ascending colon was found distended and the exact cause of the obstruction not very plainly revealed. One other point of considerable interest was the escape of foul blood-stained mucus from the anus after the colon had been opened, as it proved, above the obstruction. At the time it did not strike me as peculiar, because I thought the obstruction was lower down at the splenic flexure, but when it was shown to have existed at the hepatic flexure, it seemed strange that none of this foetid material should have been discharged through the wound, which was so close to the obstruction. I believe that this difficulty was one of my own making, and that the water that was injected through the wound at the operation forced this material beyond the hepatic flexure, which had ceased to constitute an obstruction when the distension of the bowel above had subsided after the escape of gas through the newly-formed opening.

A CASE OF RENAL HYDATIDS TREATED BY ABDOMINAL SECTION.

By FRANCIS IMLACH, M.D.

WHEN hydatids grow in either kidney the tumour may burst into the renal pelvis, and the cyst-walls, together with their fluid contents, be discharged *per urethram*. This discharge may quickly cease or it may continue for years, and end in extensive renal suppuration. But if the hydatid tumour grows as large as an orange, or, at the most, as large as the adult head, rupture into the peritoneal or pleural cavity appears to be its usual course. Rupture into the peritoneum may cause rapidly fatal suppurative peritonitis, though by a more chronic process, of which I have seen an instance, the peritoneal cavity may become filled with thick fluid, like pea-soup. In either event, incision, free irrigation, and draining are obviously indicated.

The case I have to record is one in which a renal cyst grew to the size of the uterus at full term, and so closely resembled it that before operation repeated stethoscopic search for the fetal heart-sounds was made. The patient, who was 43 years old and thrice married, had a child at 18, but none since. She made a bad recovery, thinks a lump appeared in her abdomen soon after childbirth, and that her tumour grew from this lump. During the past eight months menstruation had entirely ceased and the abdominal tumour had increased rapidly. On admission to the Liverpool Hospital for Women, to which at that time I was attached, the tumour was smooth, oval, and tense, and not at all like an enlarged kidney. It was mobile; on its left side was an outgrowth resembling a small cystic ovary, and on its right side a similar but smaller nodule. There was dullness in the left flank, while the right flank was resonant. The sigmoid flexure of the colon passed in front of the tumour, and it was only this circumstance which seemed against the diagnosis of fibro-cystic uterine tumour. There was no hydatid fremitus. *Per vaginam* the tumour was apparently continuous with the uterus, but the cervix was not soft, as in pregnancy.

On August 3rd, 1885, an exploratory incision was made in the middle line of the abdomen. The exposed mass looked like medullary cancer of the uterus, but when its wall, which was half an inch thick, was punctured with a trocar fluid clear as spring water poured out, and the diagnosis became plain. After a free incision of the cyst-wall with scissors hosts of hydatids spurted out, many of them as large as Tangerine oranges, a multitude about the size of hazel-nuts, and others smaller. Renal tissue was discernible in the cyst-wall, and it became evident, while removing the last of the hydatids, that the tumour occupied the region of the left kidney. The empty capsule