

flexor muscles alike tend to shorten; and as the displacing muscles are pretty equally balanced, we cannot relax them as in treating a simple fracture of the leg: hence, if the extension and counter-extension be not kept up, the muscles tend to draw the broken fragments over each other. If all fractures of the femur were transverse, so that the broken surfaces, when properly adjusted, would serve to check each other when lateral displacement was prevented by the lateral splints, or if muscles ceased to act whenever the fracture was set, then our plans of treatment might be much simplified; but, unfortunately, fractures of the femur are often oblique, and the opposed inclined planes tend to glide upon each other and produce shortening from very slight movement, and muscles contract and cause displacement even after the most careful adjustment; for these reasons, I hold that we must take means to prevent such shortening by *keeping up the extending power, not increasing it—merely keeping the advantage we have obtained*—and all that is required for this purpose is to keep tight the perineal band at the upper part of the splint, which, by pressing down the splint, retains the limb of the proper length. I have more than once seen surgeons proceed to increase extension by tightening the handkerchief or bandage which fastens the foot to the lower part of the splint, the effect of which is simply to push up the splint, and with it the lower broken portion, and so cause shortening. If the lower bandage requires to be re-adjusted, extension and counter-extension should either be made by assistants, as when setting the fracture originally, or else firm counter-pressure should be made by an assistant pressing down or fixing the splint from above, whilst the foot bandage is being tightened.

In adjusting fractures of the femur at first, I make it a rule that the fractured limb should be fully half an inch longer than the sound one, so as to allow for the yielding of the intervening articulations of the knee and ankle.

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ARTICLE II.—*Case of Cancer of the Cæcum, accompanied with Cæco-duodenal and Cæco-colic Fistulæ.* By D. RUTHERFORD HALDANE, M.D., Pathologist and Special Assistant Physician to the Royal Infirmary.

JOHN D——, fifty-two years of age, a native of the North of Scotland, was admitted into the Royal Infirmary on the 5th June 1861, complaining of severe pain in the right iliac region.

**Past History.** The patient, a man of considerable intelligence, stated that he had been at sea all his life, at first before the mast, but latterly as master of a coasting vessel. His habits had always been temperate, and with the exception of an attack of



ague many years before, his health had been uninterruptedly good until his present illness. About two years ago he began to suffer from pain, at first in the back and shooting through the abdomen, but of late chiefly referred to the right iliac region. From that time his appetite fell off, he had occasional vomiting, and his complexion gradually assumed its present sallow appearance. Notwithstanding diminished strength and almost constant uneasiness, he was able to continue at sea until six months ago. At that time there was a swelling in the right hypochondriac region, and a surgeon whom he consulted informed him that he had a disease of the liver. During the last two months his legs began to swell, hardness gradually made itself manifest in the right iliac region, and the pain in the same situation increased so much as to prevent him from standing erect. His wife stated that almost from the commencement of his illness, his temper had become very irritable.

**Condition on Admission.** The patient, who was moderately emaciated, had a sallow complexion with a faintly yellowish tinge, and a somewhat anxious expression of countenance. He complained of pain in the right iliac region, much aggravated on attempting to straighten the body, but relieved by direct pressure. There was almost total loss of appetite, and some thirst; he had a feeling of nausea, but had not vomited lately; his bowels, which at one time were loose, had of late been habitually constipated. His urine, passed in natural quantity, was slightly turbid, of faintly acid reaction, and contained no albumen. On standing, it speedily became alkaline, and abundant crystals of triple-phosphate were deposited.

On examination, the abdomen was found to be somewhat enlarged, chiefly owing to tympanitic distension of the intestines, but fluctuation could be felt in the dependent regions. There was slight swelling of a rather irregular character in the right iliac region, and on palpation, a diffused, rather superficial hardness could be felt. The superficial inguinal glands on this side were a little enlarged, and somewhat tender on pressure. There was swelling of both lower limbs, chiefly, however, of the right, which was markedly œdematous, and pitted on pressure. There was no difference in the temperature of the limbs, but the patient stated that he suffered much from cold feet. On percussion, the extent of the hepatic dulness was found to be considerably diminished, not amounting, on the right side, to more than between two and three inches from above downwards, while in the epigastrium percussion was quite clear.

The opinion formed at this time regarding the case was, that there was cancer of the peritoneum, chiefly in the right iliac region; that there was pressure (either from thickened peritoneum, or from enlarged glands) on the aorta, vena cava, and right iliac vein; and that the liver was probably cirrhotic.

As the patient's bowels were constipated, he was ordered to take an electuary containing bitartrate of potash and magnesia; hot



fomentations were directed to be applied to the painful part. His diet to consist of whatever he should fancy, and to include four ounces of wine.

During the week following admission, the patient's condition had improved considerably: the pain in the right groin had diminished; he was able to stand erect, and even to walk a few steps without seriously aggravating it. His appetite had slightly improved, his bowels had been kept regular, and he had had neither sickness nor vomiting.

He was directed to continue the same treatment.

On the 19th of June, the bowels having shown a tendency to become loose, he was ordered to discontinue the use of the electuary, and to take three grain doses of the citrate of iron and quinine.

On the 22d it was found that diarrhœa had set in during the previous night, and at visit the patient had a somewhat exhausted appearance. Grapes, which he had been taking with some relish, were directed to be stopped, and he was ordered chalk mixture, with the addition of catechu and laudanum.

On the 24th the diarrhœa was little, if at all, relieved; the matter passed was quite liquid, of a light colour, and had a most offensive, *rotten* odour. The appetite was totally gone; there was much thirst; he complained of a feeling of sickness, but there had been no vomiting. The hardness in the right groin was found to have extended, the swelling was more marked, and there was a blush of redness on the skin.

On the 27th there was marked swelling of the right iliac region, with considerable redness. On gentle palpation of the tumour, emphysematous crackling was felt.

The patient was seen by Mr Spence, who detected deep fluctuation, and made an incision into the most prominent part of the swelling, with the effect of giving issue to bubbles of air, pus, and thin feculent matter, similar to what had been passed by stool. Charcoal poultices were directed to be applied to the groin, and an increased quantity of stimulants was ordered.

During the three following days the patient gradually sank; the diarrhœa went on unchecked; the wound continued to discharge very fetid matter; and there was a constant feeling of sickness, but no vomiting; hiccough at last set in, and he died at noon on the 30th of June.

The body was examined 25 hours after death. When the thorax and abdomen were laid open, it was found that the liver was pushed upwards by the distended stomach and intestines, and was overlapped by the right lung to such a degree that not more than two inches in depth of its substance was visible.

The heart and lungs were quite healthy.

The abdominal parietes in the right groin were in a sloughy condition.

Post-mortem  
Examination.



The parietal peritoneum was adherent to the anterior surface of the cœcum, and the intestines in the right iliac and pubic regions were matted together. When the adhesions in the inguinal region were separated, a cavity filled with a dark-coloured fetid matter was opened into: this was found to be the cœcum, its anterior wall being in a gangrenous state. The sigmoid flexure of the colon was closely adherent to the cœcum, and a communication, fully as large as a crown piece, existed between them. About the point of junction of the cœcum and ascending colon, was an opening which admitted the little finger, and which communicated with the duodenum. On the duodenal aspect this opening had a regularly rounded form, and its edges were smooth; on the cœcal side the margins were irregular, and the passage of anything between the two portions of intestine must have been almost or altogether prevented by the prominence of the thickened and indurated folds of the cœcum. The opening was situated five and a half inches from the commencement of the duodenum, and was on the lower aspect of the gut. The thickened condition of the walls of the great intestine extended from the commencement of the cœcum to about four inches along the ascending colon, where it ceased abruptly, but where there was a stricture which barely admitted the point of the fore-finger. The thickening was found to be dependent upon the presence of cancerous matter in the sub-mucous tissue; in some places the mucous membrane was still entire, but in others it had given way, and in these situations the inner surface of the gut had a fungating appearance. Owing to the swollen condition of the cœcum, the opening of the ilium into it was considerably obstructed; only one finger could be passed along.

The lumbar glands lying along the lower part of the spine were enlarged and cancerous, and pressed upon the aorta and vena cava.

The right ureter lay behind the thickened commencement of the cœcum, and was compressed by it; above the obstruction the duct was dilated, and the kidney was found to have undergone partial cystic conversion.

The liver was of the natural size; it was of a buff colour, was softer than natural, had a specific gravity of 1030, and on microscopic examination, the hepatic cells were found to be loaded with fat.

All the other organs were natural.

**Remarks.** The interest of this case is chiefly pathological, though it presents some points of practical importance. From the time of the patient's admission into hospital, no doubt was entertained that he was the subject of malignant disease: the duration of the illness, the constant pain, the gradual loss of flesh and strength, and the cachectic appearance, all pointed to a conclusion which physical examination confirmed. From the superficial character of the hardness, I supposed that the peritoneum was the seat of the disease; the possibility of the cœcum being affected did not occur to me. No doubt at the time he was first seen adhesions



had taken place, and the cœcum consequently was in close contact with the abdominal wall. The occurrence, however, of emphysema of the integuments, and the escape of air and feculent matter from the incision, made it clear that the intestine, and probably that the large intestine, had been opened into. From the appearances found on dissection, it would seem that the disease commenced in the cœcum; adhesion of its serous surface to the abdominal wall took place, sloughing of the wall of the gut occurred, and air and feces escaped into the cellular tissue.

The existence of fistulous communications between different parts of the intestine is interesting. These communications are not of frequent occurrence, although a considerable number are on record, and have been brought together by Dr Murchison.<sup>1</sup> Amongst these intestinal fistulæ, perhaps the most interesting are those in which there is an abnormal communication between the stomach and transverse colon. Of this variety I have met with two instances; one (already published by Dr Murchison) was in the case of a man aged 40, in whom the condition in question was the consequence of a simple or perforating ulcer of the stomach; the other was in a man aged 47, in whom, as the result of cancer of the great curvature of the stomach, there were two gastro-colic fistulæ. Cœco-duodenal fistulæ appear to be much rarer, and, indeed, from the comparatively fixed condition of both portions of intestine, are but little likely to occur.

In the case under consideration there were no symptoms which suggested the existence of any abnormal intestinal communications. There was no vomiting during the patient's residence in hospital, and it was not noticed that the feces contained food in a partially digested condition. In fact, although an opening existed between the cœcum and the duodenum, I question whether anything passed from the one portion of intestine to the other. The communication, as described in the account of the post-mortem examination, was of a valvular character, and could scarcely have permitted the passage of the intestinal contents. It seems probable, however, that the greater part of the feces passed directly from the cœcum into the sigmoid flexure of the colon, for the stricture of the ascending colon must have been a serious impediment to the natural course of the excrements, while the opening into the sigmoid flexure was so free, that every facility was afforded for the contents of the cœcum to take the shorter route. Such a communication is of course attended with very different results from what would follow in the case of a free opening between the duodenum and the large intestine. In the latter case, chyme would pass directly into the colon, absorption would take place very imperfectly, and death from inanition would speedily ensue. In the cœco-colic fistula, however, matters already feculent are merely expelled somewhat sooner than natural, and probably no material effect on nutrition is produced. In the above

<sup>1</sup> See the July and August Numbers of this *Journal* for 1857.



case, in consequence of the contraction near the commencement of the colon, the communication of the cœcum with the sigmoid flexure was probably rather advantageous than otherwise.

The only other point which seems to require remark is the condition of the liver. From the greatly diminished hepatic dulness, and from the presence of a slight degree of ascites, I considered it probable that the organ was cirrlosed; this, however, did not turn out to be the case. The liver was of the natural size, and the character of the percussion was explained by the fact of the organ having been pushed upwards and backwards by the distended intestines behind the lung, to an extent I have rarely observed.



ARTICLE III.—*The Wire Seton in Hydrocele.* By JAMES D. GILLESPIE, M.D., F.R.C.S.E., Surgeon to the Royal Infirmary of Edinburgh.

(Read before the Medico-Chirurgical Society of Edinburgh, Nov. 20, 1861.)

It is now about two years since I published in the *Medical Gazette* an account of the treatment by the wire seton of two cases of hydrocele. I had felt it my duty to place before my professional brethren the unfavourable experience I had had of such a procedure, as it had been, through the same medium of communication, urged strongly upon the profession.

I confess that I was led to make trial of the wire seton upon theoretical grounds, — believing, with Professor Simpson, that adhesive inflammation only was likely to be excited by the introduction of metallic wires. The sequel proved, that violent and indeed dangerous suppurative action might arise from the employment of such a seton, and subsequent observation places this fact on unassailable grounds.

I might have remained contented with what I have already written about this plan of treatment, had I not become aware, that a pamphlet was published in August of the present year, and extensively circulated among the professional and “unprofessional”<sup>1</sup> public, which contained two articles highly laudatory of the wire seton, as also a lengthened criticism on my own remarks. I shall not stop here to discuss the propriety of issuing such a pamphlet, containing purely surgical matter, for the benefit of *unprofessional*, or rather, I should suppose, non-professional readers; but there is a sentence contained in that *brochure*, as it has been called, which has determined me on bringing the subject again before the Medico-Chirurgical Society.

That sentence is as follows:—“Had Dr Gillespie seen this

<sup>1</sup> Medical and Surgical Memoranda, by Dr James Young, *vide* Preface.