not be moved into the wound, so I enlarged this to get a view of it. It looked dense and puckered, and, on pulling out a coil or two of intestine, was found to lie in the mesentery; it felt densely fibrous as well as somewhat chalky, and there was a movable gland close beside it. I did not at this stage discover what connection this mass had with the obstruction, nor any cause for it, and believing I felt a distended cæcum I made a fresh incision over this, intending to drain the bowel here. I found the cæcum empty. With fingers in each wound I was now able to follow the ileum from the cæcum, and soon reached the point of obstruction. One of the lowermost coils of the ileum, empty, was drawn up and fixed against the spine by fibrous puckering and adhesions of its mesentery, and bound by bands and adhesions to the adjacent coil, which was full of fluid, and, with its proximal neighbour, had been partially twisted on a vertical axis. At the root of this mesentery was the cicatricial mass first discovered. These three coils then seem to have taken part in causing the obstruction. It is probable that during a rather sudden or excessive alimentary transit the two proximal coils were quickly distended, but, owing to the mechanical confinement of the distal one against the spine, could not at once pass on their load, fell into the pelvis, and, being as it were partly drawn up and fixed at their points of flexure (by the cicatrix in the mesentery and by adhesions), were kinked, and rotated from left to right on their mesenteric axis. The adhesions, which were numerous, dense, and evidently very old, were separated or cut, and finally the bound-down coil was so completely loosened that there was no further tendency to kinking. In spite of this the distended portion showed no sign of passing on its contents, and I was afraid to leave the adjustment to Nature, lest on the first passage of fluid into it the liberated coil should fall into the pelvis, and offer the serious obstacle of an inert and overloaded tube to any further progress. To prevent this, and to start natural peristalsis by relieving the over-distension, I mechanically squeezed the fluid contents of the distended coils through the empty ileum into the cæcum, repeating the manoeuvre some half-dozen times till the cæcum was moderately full, and the ileum uniformly occupied with the fecal fluid. Both wounds were then sutured, and the patient returned to bed in very good condition. The subsequent progress was satisfactory and uneventful, the bowels relieving themselves the next day. The patient was sent home, with strict injunctions as to care and moderation in diet. I was anxious on this head because, though the operation was so successful in its immediate result, it was impossible to overlook the danger of fresh adhesions forming, and leading to a renewal of the old mechanical difficulties. On the other hand, if, as seemed not unlikely, the contractions and adhesions were due to a localised peritonitis excited around tuberculous deposits in the mesentery long years ago, there might be more hope that such fresh adhesions as occurred would not be so crippling as the older ones had proved. Unfortunately we had a proof of the justness of these fears, for in September last, ten months after the operation, the patient developed another attack of obstruction, with fecal vomiting, for which he was again admitted into the hospital. I was away, and my colleague Dr. Firth kindly took charge of him. The attack, however, was comparatively mild; and the obstruction, I am told, yielded in a day or two to enemata, and the patient again went home well. I have seen him to-day (January 26th, 1898), and he tells me he has had no trouble with his bowels since last September, and has, moreover, passed safely through a long attack of pleurisy.

Contractions and adhesions are among the less common causes of intestinal obstruction, and when present generally lead to a long train of chronic bowel trouble, with the usual accompaniment of recurring attacks of partial obstruction, ending at last in a subacute attack of complete stoppage. Some very interesting cases of this kind were recorded by the late Dr. Hilton Fagge in the *Guy's Hospital Reports* for 1868.¹ I can find no instance recorded parallel with mine where such a condition as there existed gave apparently no evidence of its presence till a typically acute attack of obstruction laid the patient at death's door. With regard to treatment, most surgeons are satisfied that the existence of acute or prolonged obstruction negatives a severe operation, but when convalescence is established more radical measures may be adopted. In this case the ideal operation would have been resection of the affected coils of ileum; a less severe but probably quite effectual one, an ileo-colic anastomosis. Considering the amount of risk inseparable from either of these operations, the age of the patient, and his present satisfactory condition, I should hesitate much before suggesting either step, even if there was any likelihood of the patient's consenting. If the worst come to the worst, we know the nature of the lesion, and its seat, and could adopt severer measures if they became unavoidable.

CASE II.—A woman, aged 51, whom I saw in consultation with Mr. Webb, for some time had developed symptoms suggestive of a chronic obstruction, and these culminated in the attack for which I saw her. Sickness and distension appeared, and on the third day after their onset I saw the patient. The distension was peculiar, in that it was almost confined to the lower half of the abdomen, the epigastrium notably escaping. There was some dulness in the flanks. Severe attacks of colic were frequent, during which a large coil became prominent in the right iliac fossa and extended across the abdomen below the navel, but did not reach the left iliac fossa. The rectum was empty. We considered the case probably one of sigmoid cancer, and she was sent into the hospital the next day, when laparotomy was performed. Through a 2-inch median incision I passed a finger and felt a hard mass in the sigmoid flexure. Rapidly exposing this by a fresh incision, a typical annular carcinoma of the upper end of the sigmoid was hooked up. The parietal peritoneum was attached to the skin all round²; a loop of sigmoid, with the growth, was

brought out and secured in the wound by an Allingham's stitch through its mesocolon, and a few stitches uniting the ends of the bowel to the skin, the two ends being approximated as closely as possible. The bowel and wound were dusted with iodoform, and the edges smeared with vaseline, and then the bowel was opened as far above the growth as possible, and drained through a piece of rubber tubing. On the seventh day, when the abdomen was flat, and all effects of the obstruction had disappeared, the cancerous mass was completely cut away under an anæsthetic. There was considerable bleeding from the mesocolic axis between the two ends of the intestinal loop. The two mouths of bowel thus produced were secured to each other and to the edge of the wound by a few extra stitches, but this was probably unnecessary. The sections through the bowel were quite free of the carcinomatous mass, and some enlarged glands in the mesocolon were removed at the same time. She left the hospital, passing solid, natural motions, without any skin irritation. The possibility of closing the artificial anus was discussed, but she is so comfortable that she prefers to let well alone.

Enterectomy in stages seems to me to have an overwhelming superiority over every other method, and it is probably practicable in the large majority of cases where the growth or other lesion is limited and free from adhesions. I do not know whether the method originated with Mr. Greig Smith, but in the sixth edition of his *Abdominal Surgery*³ he recorded 4 successful cases of the completed operation—in the sigmoid, descending and transverse colon, and the ileum—the artificial anus, that is to say, having been in each case closed by his ingenious extraperitoneal operation. This latter device, if successfully achieved, robs the final stage of its dangers, and removes the chief objection that might be raised to an enterectomy in successive stages. Even without this final step, provided the artificial anus be in the large bowel—at any rate, in the descending colon or sigmoid—the patient's condition is one of very little discomfort; and he has at least a chance of immunity from a mortal disease. Whether my patient has been rid of her cancer it is of course too early to speculate; the glandular infection is against such a happy chance; but, on the other hand, carcinoma of the alimentary canal seems to remain longer limited to the part first attacked than is the case with many other forms of cancer, and provided there has been no deeper glandular infection than that seen and removed, she may yet prove to be a brand plucked from the burning. This patient, too, I have seen to-day, and except from some contraction of the upper orifice from neglecting to wear a plug, as she was directed to do, she is in a highly satisfactory condition.

In conclusion, I should like to acknowledge the debt these patients owe to their medical attendants, for I have no doubt that it was largely owing to my seeing them at an early stage of their attacks that the results have been so satisfactory. It is early recognition and early operation that we most want.

NOTES AND REFERENCES.

¹ Vol. xiv, p. 323, *et seq.* ² Following Mr. Greig Smith's advice, I should not do this in future, but expose the bowel to the raw surface of the wound instead. ³ 1897, vol. ii, p. 636. Mr. Barling has published a case in which he performed this operation (BRITISH MEDICAL JOURNAL, 1898, i, p. 374).

A CASE OF ŒSOPHAGOTOMY FOR IMPACTED ARTIFICIAL TEETH.

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CASES of impaction of foreign bodies in the upper part of the alimentary canal are not infrequently met with in hospital practice, but the greater proportion are cases in which the foreign body is lodged in the pharynx, and can generally be dealt with from the mouth. But when they have passed from the comparatively wide pharyngeal chamber into the narrow passage below the cricoid, for example, into the œsophagus, the condition is a much graver one, not only on account of the greater probability of their becoming impacted and therefore presenting greater difficulties in their extraction, but also, should this be impossible, on account of the far greater dangers attending operative measures. Of these cases a certain number of the foreign bodies, for example, coins, are doubtless often dislodged by the passage of a probang or bougie, and passed on into the stomach and intestine, from whence they are later on evacuated, probably without further harm to the patient. But as regards artificial teeth the condition is different, probably owing to the fact that those which get into the œsophagus are either tooth plates which have been broken and present sharp corners, or consist simply

of a few teeth, which are connected with their neighbours by sharp points or hooks. In the case I record below the patient had been for many years in the habit of wearing three artificial incisors attached to a plate which had been broken some months previously, and which from motives of economy she had neglected to get repaired.

History.—E. R., aged 33, who was not in the habit of removing her teeth at night, woke up early in the morning of October 30th, 1897, with a very sore throat, and found that she had lost her teeth. As she was subject to occasional epileptic attacks she concluded, "as she felt so bad," that she had had one during the night and had swallowed her teeth. She sent for her doctor, who advised her to take nothing but gruel, but she found that swallowing was so painful that she took "hardly anything." Thirty-six hours afterwards her breath began to get short, and this gradually increased for the next twenty-four hours, when she applied at the hospital for admission.

State on Admission.—The patient was a healthy looking woman with a distinctly anxious expression accompanied by slight cyanosis. There was marked stridor, respirations 28, pulse 110, no cough. Laryngoscopic examination showed nothing abnormal. There was distinct diminution of resonance at both pulmonary bases for about three finger-breadths and the breath sounds over this area were very feeble. Elevation of the ribs was fair, but there was little expansion. On examining her throat externally she complained of marked tenderness, much increased by pressure, about one inch below and to the left of the cricoid, at which point there was a distinct fulness to be felt on deep pressure. A bougie passed $7\frac{1}{2}$ inches when it was distinctly stopped. The veins of the neck were abnormally full.

Operation.—As there seemed but little doubt that her teeth were firmly impacted in the œsophagus, and were causing laryngeal obstruction, she was advised that an œsophagotomy was necessary and to this she readily consented. She was accordingly put under chloroform, and I proceeded, assisted by Dr. Holman Weekes, to make an incision about $3\frac{1}{2}$ inches in length, along the anterior border of the left sterno-mastoid muscle, commencing about half inch above the upper border of the thyroid cartilage. The common carotid sheath was then gradually exposed. The sterno-mastoid muscles having been drawn outwards together with the large vessels, and the omohyoid muscle hooked down, the trachea and œsophagus were defined and the former having been pulled over to the right and all venous oozing, which on account of the interference with respiration was of a rather free character, stopped, the foreign body could be easily felt about three-quarters of an inch below the cricoid, bulging towards the posterior surface. A sharp point which had almost penetrated the œsophageal wall could be detected and a vertical incision of about an inch having been made over it, the plate was easily extracted. At the moment of extraction the venous bleeding was well marked, but firm pressure being applied for a few minutes it gradually, as respiration became freer, ceased. The point had almost ulcerated through the œsophageal wall, which was quite rotten, and about a teaspoonful of pus escaped when it was incised, and therefore no attempt at stitching up the gullet wall was made. A drainage tube was inserted from the opening in the œsophagus to the lower end of the wound, what was then stitched up.

After-History.—The patient soon recovered from the shock of the operation and expressed herself very grateful for the relief she experienced. She was encouraged to sit up in bed as much as possible, but no attempt at fixing her head was made. She was fed entirely by means of suppositories and nutrient enemata, and she seemed to be doing so well and suffered so little from thirst that no attempt at feeding her by the mouth was made until the sixth day, when she was given a little milk, the greater part of which, however, ran through the tube in her neck. During the first few days the discharge was of a rather free character, but after the fifth day it gradually decreased, and the tube, which from this time was shortened every other day, was eventually removed on the fourteenth day. The wound above the tube healed by first intention, the stitches, twelve in number, being removed on the ninth day. The patient seemed so comfortable and her strength was so well maintained that no further attempt to feed her by the mouth was made until the seventeenth day, when she was found to swallow fluids comfortably, and she has experienced no difficulty or discomfort during deglutition from that time. The wound was soundly healed on the twenty-third day, and she was discharged from hospital four days later.

Description of Plate.—The plate was of an irregular quadrilateral shape and measured $1\frac{1}{4}$ inch from before backwards and about $\frac{3}{4}$ inch from side to side. It carried three incisors, and attached to the inner of these was a sharp gold spike by which it was connected to the neighbouring tooth. It was obviously this spike which, by penetrating the œsophageal wall, had prevented its further passage to the stomach.

PRIMARY TUMOUR OF RIGHT AURICLE OF HEART, RUPTURE OF INFERIOR VENA CAVA.

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PRIMARY tumours are exceedingly rare in the heart. According to Berthensen the structure in 30 published cases of primary tumours of the heart was as follows: Sarcoma 9 (pure sarcoma 5, fibrosarcoma 3, myxosarcoma 1), myxoma 7 (pure myxoma 4, fibromyxoma 3), fibroma 6, syphilitic tumours 2, cancer 3, lipoma 2, cyst 1. Pawlowski only succeeded in collecting 3 cases of fibroma of the heart. The patient from whom this interesting tumour was taken was a charwoman, aged 43, admitted under my care into the Mill Road Infirmary on January 11th, 1898.

HISTORY.

She first complained of pain in the chest, with dyspnoea on exertion, and had to sit up in bed at night $3\frac{1}{2}$ years before admission. This continued without intermission, although she was able to do a little work until 2 months before admission, when she was seized suddenly with great pain in the right chest, which prevented her breathing for a time. She has been addicted to alcohol for some years. There was no history of syphilis.

CONDITION ON ADMISSION.

She was a stout, muscular, well-nourished woman, although she said she had lost flesh lately. She had an anxious expression, could not lie down in bed, and had great dyspnoea of a spasmodic character. There was moderate ascites and œdema of the lower extremities; the most notable feature was the enormous enlargement of the superficial veins of the thighs, abdomen, and thorax, which formed two columns on either side of the middle line of the abdomen. They were very tortuous, but the current of blood in them was towards the heart. This condition of veins at once suggested the probability of the inferior vena cava being occluded at some part of its course near the heart with anastomoses between the superficial epigastric and long thoracic and internal mammary and intercostal veins. The right side of the chest was almost immobile and completely dull to percussion both back and front, with absence of breath sounds, and all the symptoms of effusion. The left lung was normal. The heart was displaced outwards considerably. Its action was quite regular, and there was a soft blowing systolic murmur heard at the base and conducted up the sternum for 2 inches and outwards into the axilla and back. The liver was pushed downwards, forming a rounded prominent tumour in the epigastrium, the lower edge was rough and nodular, and extended to within 1 inch of the umbilicus; the abdominal cavity contained a fair quantity of fluid.

AFTER-HISTORY.

The right pleural cavity was aspirated and 61 oz. of what appeared to be pure blood withdrawn. This gave the patient considerable relief and her dyspnoea subsided, allowing her to lie down in bed. There was a slight attempt at expansion of the lung and the dullness disappeared to some extent, but it soon became absolute again, and as we evidently had a hæmothorax to deal with I did not think it desirable to aspirate again. The temperature ranged between 99° and 101° . The pulse was 100 and the respirations 24.

The chief points of clinical interest in this case then were: The great dyspnoea and inability to lie down in bed, much more pronounced during the night; the complete filling of the right pleural cavity with blood, the enormous distension of the superficial veins of the abdomen, thorax, and lower extremities, the general œdema with ascites, and the displacement of the heart and liver, which was enlarged and nodular. The kidneys were apparently healthy, as the urine was normal. The diagnosis was difficult, but after a careful consideration of the points mentioned I was of opinion that she had a new growth in the lung or mediastinum with probably secondary deposits in the liver, and that the growth in the chest was pressing on the inferior vena cava before or at its entrance into the auricle. The diagnosis however in many points proved to be wrong. The progress of the case was short and uneventful. There was latterly great pain on pressure over the precordia, the dyspnoea increased, and she died on February 16th from syncope.

Necropsy.—At the necropsy, twelve hours after death, the body was enormously distended with gas, the parts chiefly affected being the neck, the upper part of chest, the stomach, and the liver. The extremities did not contain gas; when liberated it was not offensive. The blood was carefully examined and stained, when enormous numbers of the bacillus *aërogenes capsulatus* were found, thus accounting for the rapid gas formation after death. The bacilli were in larger numbers in the blood from the liver, but could be obtained from the blood of any part. On opening the chest the right pleural cavity was found to be quite full and distended with dark-coloured fluid blood, with here and there a few clots, the amount being between 6 and 7 pints. The heart was displaced outwards. The right lung was collapsed, and pressed against the vertebral column towards the apex of the cavity.