

neighbourhood of the solar plexus or pancreas. I could also eliminate the liver, spleen, and kidneys. Finally, I came to the conclusion that I had to deal with some functional disease of the stomach, but the remedies I tried seemed of no effect. All I appeared able to do, until the incidents of the beef-tea, aerated water, and cold water gave me the clue, was to keep the pain down with hypodermics; these incidents decided me to give much larger doses of an antacid than I had hitherto done. The effects of drachm doses of the antacid were simply marvellous, yet any less dose had little or no effect; other antacids in similar large doses were given, but none of them acted with the rapidity or gave the same relief as the bicarbonate of soda. On two occasions whilst taking the antacid the patient vomited a large quantity of watery fluid, sour smelling, each time the ejected matter being in much larger quantities than the fluid previously imbibed. The action of the sulphonal appeared not so much to give sleep as to act as an analgesic, and thus allow natural sleep, for if it was left off for a night, or diminished below ten grains, sleep was obtained, but was more broken by attacks of pain, and more doses of the antacid had to be taken in the night, but not during the following day. The action of the carbolic acid was, no doubt, an analgesic and antiseptic, preventing the fermentation that was probably the cause of the abnormal quantity of acid. When I first saw the patient the same doses of the acid appeared to have no effect, yet when given later its action was manifested after the first day. One other point of interest about the case was that opium, chloral, cannabis indica, and belladonna, whether hypodermically or by the mouth, practically failed to have any effect on the pain, and if any it was only of a very temporary character.

Las Palmas.

GASTRO-ENTEROSTOMY.

BY T. KILNER CLARKE, F.R.C.S. ENG.,
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THE following case of gastro-enterostomy, though unsuccessful, is more illustrative of the difficulties of the operation and its after dangers than the successful one I published some few months ago, the subject of which is still, ten months after the operation, in the enjoyment of good health.

Mrs. S—, aged thirty-six, a spare, dark-eyed woman, had been suffering from gastric troubles for a year, when, in consultation with Mr. Haigh of Meltham, her medical attendant, I first saw her on May 6th, 1890. During this time she had suffered much from vomiting, and had had several attacks of hæmatemesis, at times considerable in amount. For the few days previous to my visit everything she had taken was rejected. There was a tumour the size of an orange in the situation of the pylorus—i.e., on the right edge of the mesial line and extending down to the level of the umbilicus; the stomach was small, but the other organs of the body appeared healthy. The case seemed to us to be a very suitable one for either pylorotomy or gastro-enterostomy. Using a mixture of chloroform (one part) and ether (two parts) as the anæsthetic, administered by Dr. Scougal, and assisted by Mr. Haigh and Mr. Marshall, I operated on May 13th, 1890. A three-inch median incision reaching as far as the lower edge of the umbilicus exposed the lower border of the stomach and the great omentum. The tumour, which was found to be the enlarged and thickened pylorus, was firmly adherent to everything in its immediate neighbourhood. Its size and adhesions and the contracted state of the stomach rendering pylorotomy impossible, I proceeded to the alternative operation of gastro-enterostomy. The jejunum not being visible, I pushed aside the great omentum, and, turning up the lower border of the stomach, saw it lying beneath the transverse meso-colon and arising from the spine on a level with the umbilicus. Making a rent in the meso-colon I brought up the intestine, emptied some six inches of it, and isolated the emptied portion from the rest of the gut; then dropping the jejunum back into the abdomen I made an incision into the anterior wall of the stomach, an inch in length, parallel to and about an inch and a half above the greater curvature, and inserted the calcified bone plate. The second plate was then fixed

in the jejunum. On attempting to bring the two plates into apposition so as to tie the corresponding threads, I found it could not be done, as the contracted size of the stomach and the pyloric adhesions prevented my bringing the stomach wall sufficiently outside the abdomen. I therefore took out the stomach plate, sewed up the incision with a double row of Lembert sutures of fine silk, made a new incision in the posterior wall of the stomach, introduced the plate afresh, and readily brought it into close apposition with the jejunum plate. The corresponding threads were then tied and the abdominal wound closed. A towel folded to form a pad was bound firmly over the dressings and removed after forty-eight hours. For three weeks after the operation the pulse kept under 100, and 99.6° was the highest temperature. The progress of the case was briefly as follows.—First day: Very little pain; frequent slight hæmatemesis. Nutrient enemata of beef-tea and brandy every four hours.—Second day: Hæmatemesis going on; very good night; no pain.—Third day: Very good night; vomited every two or three hours till 2 P.M., when distension came on with pain in the chest and difficulty of breathing. This was relieved by fomentations and a clyster of glycerine (two ounces). After this the patient retained wine whey in small quantities and a little hot tea.—Fourth day: Wine whey and chicken broth.—Fifth day: Vomited several times; a good deal of pain in left side of the abdomen, was relieved after the application of a mustard plaster, and the appearance of some offensive discharge from the lower end of the abdominal incision. The wound was opened a little, and a couple of short drainage-tubes were introduced at its upper and lower end.—Sixth day: No vomiting for the last three days; wound discharging freely. Having fluid food and a nutrient suppository night and morning.—Eleventh day: No sickness; appetite very good; was given boiled mutton; upper tube removed.—Twelfth day: Second tube removed; slight vomiting at 8 A.M., but afterwards very well up to afternoon, when the artificial opening between stomach and intestine seemed to close suddenly. While being fed the trickling sound of fluid passing through the opening which was distinctly audible to anyone standing by the bedside whenever the patient took any fluid food and the patient's sensations of it abruptly ceased. At 10 P.M. she vomited some twenty ounces of fluids, and from this time till her death on the thirtieth day after her operation all food taken was rejected. No necropsy was permitted, and the cause of the sudden closure of the artificial opening must remain uncertain. In two at least of the failures of this operation closure of the opening has occurred. To prevent this it would be well to sew together by a continuous fine silk suture the cut edges of the serous and mucous coats of the incised viscera, and to make larger incisions into the viscera. Operators by the old method made incisions two inches in length.

Huddersfield.

ACUTE INTESTINAL OBSTRUCTION BY INTERNAL STRANGULATION; LAPAROTOMY; CURE.

BY EDWARD J. CAVE, M.D. LOND.,
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THE operative treatment of intestinal obstruction has of late years been abundantly discussed, and the lines of practice are now pretty definitely laid down. The tendency has been more and more in the direction of early surgical interference, so that now few surgeons would countenance delay longer than is necessary for a confident diagnosis; and even in difficult and obscure cases of acute abdominal trouble, where the diagnosis is still but a matter of probability, far greater disaster results from procrastination than from early operation. An experience of six years as resident medical officer in provincial hospitals has brought a fair number of patients suffering from acute obstruction under my notice, of whom some have died without surgical interference, and two have recovered when recovery seemed past hope; while of those submitted to laparotomy for obstruction from any cause whatsoever, not one has recovered save by the formation of an artificial anus at the anterior abdominal wall. I believe this disastrous experience to be by no means un-

usual, and there can be no question that a large measure of ill-success is due to the tardiness with which surgical relief is afforded even at the present day. It is true that in cases which are brought to hospitals the delay has often already occurred before their admission: but how often has one seen hour after hour, and even day after day, passed under the old routine of a grain of solid opium every four hours, and enemata of all sizes and compositions, administered by variously elaborated mechanisms through a great variety of tubes. Although (or perhaps because) my own experience has been mainly medical, I have never yet had occasion to regret that the interference of the surgeon was too early resorted to; while the clinical and post-mortem room records which point in the opposite direction leave behind them a mental state much more dubious and uncomfortable. Until the doctrine of surgical interference at the earliest possible moment is definitely established, and recognised as one of the canons of surgery, it seems desirable that every case should be put on record, and the conditions which therein determined success or failure as clearly as may be defined. In the following case the operation was little more serious than an ordinary herniotomy, and there seemed no occasion for real anxiety after the first twenty-four hours.

Thomas T.—, aged fifty-five, a labourer, was admitted to the Crewkerne Hospital at 10 P.M. on Sept. 1st, 1890. He was in his ordinary robust health until August 29th, when his bowels were slightly and naturally moved in the morning. At 3 P.M. on that day, while mowing barley, he was suddenly seized with severe pain in the abdomen, about the region of the umbilicus, and with vomiting. He has vomited at frequent intervals each day since, the vomit latterly being dark. The pain has persisted in the same region, colicky and spasmodic. The bowels have not acted since the morning of Aug. 29th, nor has he passed any flatus. He has taken castor oil three times, which he has vomited.—Sept. 1st: At 9 P.M. he had an enema of soap-and-water, which brought away one or two small scybala; a second was quite ineffectual; three pints of liquid were injected without difficulty into the bowel. He has had a right-sided bubonocoele for some months, which disappears when he lies down, and has given him no trouble; it is back now, but comes down on coughing, immediately receding again. He lies on his back or left side, with his knees drawn up slightly. Constantly moans with the pain. Tongue moist, with a dirty brownish fur. The abdomen is a little distended, outline convex, not markedly tender. The peristaltic action of the intestines now and then visible. Nothing amiss to be felt either through the abdominal walls or per rectum. Temperature 98°; pulse 72. One-third of a grain of morphia injected subcutaneously.—2nd: Temperature 98.4°; pulse 76. Slept after the injection, and had a more comfortable night than hitherto. Pain recurred this morning, and he has vomited twice. The vomit dark and malodorous, hardly feculent. Bowels not open and no passage of flatus. Has passed no urine since admission. Very little since Aug. 29th, and that high-coloured. Has taken about six ounces of milk and a little tea. 1 P.M.: Still vomits. The vomit stercoraceous, like thick pea-soup. Had an enema with two ounces of turpentine, which returned unchanged. At 4 P.M. a consultation was held with Messrs. Alford and Webber, and with their assistance I opened the abdomen (the patient being under chloroform) by a median incision 3½ in. long. The small intestine was seen to be in one part distended and dark; in another empty. Tracing up the empty coils for a few feet, I came quickly to a strangulation. A firm, tough cord, about one-eighth of an inch in diameter, was attached to the inner aspect of the umbilicus, and passed thence downwards and backwards; its deep attachment was not determined. This band lay over the small intestine, tightly strangulating it against the posterior abdominal wall. It was divided on a flat director, when the intestine immediately sprang up, a deep indentation being left on its anterior aspect where the cord had constricted it. The bowel was hereabouts of a dark maroon colour, and the surface slightly granular. The peritoneum contained a considerable quantity of dark blood-stained serum. This was washed out with a gallon or two of hot water poured from a large jug, and the wound closed in the ordinary way with interrupted sutures of chromic gut. It was dressed with protective, a layer or two of wet gauze, and a pad of sublimated wood-wool, supported by strips of adhesive plaster. He bore the operation very well, and when put back to bed his pulse was 84. 8.30 P.M.: Temperature 98°; pulse 84.

Complains much of the tightly applied dressings. Nothing has been passed. Vomited twice on coming round from the anæsthetic. Vomited matters as before operation. Took a grain of opium at 7 P.M., to be repeated every four hours. A little ice to suck. An occasional teaspoonful of hot water or tea.—3rd (10 A.M.): Temperature 98.4°; pulse 88. Had a little hiccough last evening from 10 to 11 P.M. Slept a little in the night, not more than ten minutes together. Has not vomited again. No passage of flatus, fæces, or urine. A little intestinal rumbling about 2 A.M. Feels tight and uncomfortable, as though wanting to pass urine. On attempting to pass a catheter a stricture, which gave trouble at the time of the operation, was found temporarily impermeable; the attempt caused some bleeding. To have a little milk and soda-water in addition to previous supplies. 8 P.M.: Temperature 98.6°; pulse 84. Looks brighter and feels much easier; has no pain. Passed two pints and a half of high-coloured blood-stained urine; also passed some flatus; no vomiting.—4th: Temperature 98°; pulse 80. Not much sleep; no pain. Passed flatus freely and urine; no vomiting. 9 P.M.: Temperature 98.4°; pulse 80. Complains much of thirst and is very troublesome and discontented in consequence. Had two half-pints of tepid water injected into the rectum, the second of which returned, stained with fæces, and with a strong feculent odour. To have the opium every eighth hour.—5th: Temperature 98°; pulse 68. As his thirst was so great he was allowed in the night more fluids, and took a pint of milk-and-soda-water (1 to 2) and two pints of toast water. Is much more comfortable in consequence and more amenable. Opium pill to be omitted. On the 6th and 7th he was doing well; flatus passed freely; bowels not open; took cornflour, ground rice, &c.—8th: Very restless last night and disarranged his dressings. Hence the wound was dressed this morning; it has united and looks well. The gauze and wood-wool dressing were applied as before. 8 P.M.: Had an injection of a pint and a half of tepid water. This was followed by two very copious solid motions. From this date convalescence was rapid and uninterrupted. The wound was dressed for the second time on the sixteenth day (Sept. 17th), when it was quite firmly united. The remains of the stitches then came away, and two days later he got up, the abdomen being still supported with a pad of wool and strapping. The nature of the constricting cord in this case was not determined, but its appearance and attachment to the umbilicus suggested that it was formed by the remains of the vitelline duct; if such was the case, the lumen was obliterated.

Crewkerne.

POISONING WITH AMMONIA; TRACHEOTOMY.

By J. C. H. DICKINSON, M.B. CANTAB.,
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THE following case presents several points of interest, which are, I think, worthy of publication.

W. T.—, aged thirty-two, a publican, had been subject to attacks of delirium tremens at intervals for some years. During one of these attacks, on June 1st, he became melancholic, and swallowed a mixture of turpentine, strong ammonia, and olive oil, which he had obtained from a chemist to use as a liniment for his back. I was called in about an hour after he had taken a considerable quantity of this mixture. I found him with a flushed face, congested conjunctivæ, and a terrified aspect. The tongue was swollen and denuded of epithelium. A view of the soft palate and surrounding parts was much obscured by the swelling of the tongue. I administered an emetic of warm water and mustard; a considerable quantity of fluid, stained with blood and smelling strongly of ammonia, was brought up. In about half an hour's time he began to suffer from dyspnoea, and I called in Mr. Hamblin of Tredegar-road. The dyspnoea grew worse, and came on in paroxysms, following quiescent respiratory periods. During these attacks his face became cyanosed; he threw back his head, his breathing became loud and whistling, and he clutched the chair on which he was sitting for the purpose of using the extraordinary muscles of respiration. After witnessing some of these attacks, which became more frequent and prolonged, we