of the mesenteric veins, I have looked up the records of such cases as have been published and find that while there is much variation in the severity of the symptoms as they appear at the onset and throughout the course of the disease there are not wanting those which seem to be more or less characteristic. Thus (1) intra-abdominal pain is invariably present, sometimes commencing acutely, at other times gradually and with no more discomfort than is manifested by a sense of uneasiness. In not a few instances the pain has been colicky in character, sometimes located in the region of the umbilicus, at other times low down in the abdomen. (2) The passage of loose stools sometimes containing blood. This symptom is an uncertain one and seems to depend upon the extent of bowel involved, and the degree of its congestion. It is, however, when present an unquestionably valuable diagnostic sign. (3) Vomiting is also a very inconstant symptom and seems in like manner to be dependent upon the degree and extent to which the bowel is thrown out of action by its impaired vascular supply. It is the presence of this symptom which so frequently causes these cases to be taken as instances of acute intestinal obstruction, and which to a certain extent they are, although a wrong cause is usually ascribed to them. (4) The general condition of the abdomen is as a rule negative; there is neither rigidity, tenderness, nor distension although towards the close of the case the latter may become more or less manifest. (5) The pulse, which has sometimes remained more or less normal in power and speed, is in most cases weakened and increased in rapidity. (6) The temperature presents no certain character, although in the severe cases it is usually reduced. (7) A symptom which has been noted in not a few instances, has been great excitability of the nervous system. In my own two cases it was present to a remarkable extent and suggested, as already stated, that the patients were hysterical. It is possible that the symptom has only a very indirect connection with the disease, and is merely an accident, which arises from a constant sense of pain and discomfort acting upon a naturally over-excitable nervous system.

In conclusion, I am disposed to think that the following symptoms when occurring within a few days after an operation may be taken as suggesting post-operative thrombosis of the mesenteric vessels; and more particularly so when the operation was not one involving the intestines:—

1. The onset of intra abdominal pain, gradual or acute, but more or less constant, and possibly of a colicky character.
2. Neither tenderness on palpation of the abdomen, nor distension nor rigidity of the parietes in the earlier stages.
3. Possibly diarrhoea with or without blood.
4. Possibly vomiting, but not of the usually acute obstructive character.
5. Rapidity of pulse.
6. Undue and inexplicable restlessness and excitability.
7. Any pre-existing symptoms of cardiac or vascular disease may be considered to attach additional weight to the significance of the other symptoms.

In searching for references of thrombosis of mesenteric veins I have been unable to find any record of a case following upon, or dependent upon operation. Those given below are limited to such as were of a more or less uncomplicated character, that is to say cases, which manifested very definite symptoms the result of the thrombosis.

Recorded Cases of Thrombosis of the Mesenteric Veins.

Payne, *Path. Soc. Trans. Lond.*, vol. xxi, p. 228. Fagge, *ibid.*, vol. xxvii, p. 124. Taylor, *ibid.*, vol. xxxii, p. 61. McWeeney, *Dubl. Jour. of the Med. Sci.*, 1894, vol. xcvi, p. 169. Delatour, *Annals of Surgery*, 1895, vol. xxi, p. 24. Bradford, *Clin. Soc. Trans. Lond.*, 1898, p. 203. Johnson, *ibid.*, 1898, vol. xxxi, p. 212. Köster, *Deut. med. Woch.*, 1898, p. 329. Ballance, *Lancet*, 1899, vol. ii, p. 85. Welch, *Allbutt's System of Medicine*, 1899, vol. v, p. 218. Johst, *Inaug. Dissert.*, Königsberg, 1894. Johst also gives abstracts of the following recorded cases:—Choquet, *Bull. de la Soc. Anat.*, 1878, s. 124; Pilliet, *Prog. Méd.*, 1890, No. 25; Eisenlohr, *Jahrb. der Hamburger Staats Krankenanstalten*, 1890, ii, 2, p. 76; Dreyfous, *Bull. de la Soc. Anat.*, 1885, p. 274.

A GENERAL meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at 11, Chandos Street, London, W., on Thursday next at 3 p.m., under the presidency of Dr. Oscar Woods, when Sir T. Lauder Brunton will read a paper on Fairies, Apparitions, Visions, and Hallucinations; and Dr. E. D. O'Neill, District Asylum, Limerick, will move a resolution with regard to pensions for Irish asylums officials.

ON THE REMOVAL OF GREAT LENGTHS OF INTESTINE.*

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THE preparation of this paper has arisen out of my having been very kindly entrusted by Mr. Hayes, Senior Surgeon, Mater Misericordiae Hospital, with the publication of a case in which he performed with perfect success a very extensive resection of the small intestine in a boy aged 10. The operation was done for a crush of the intestine with extensive laceration of the mesentery. The notes of the case are briefly as follows:

History and State on Examination.—A boy, P. B., aged 10, was admitted to the Mater Misericordiae Hospital on August 3rd, 1900, with the history that he had been run over by a heavy waggon while in the prone position. The waggon, weighted with a ton and a half of grain, passed across his lumbar region. He was taken up and immediately brought to hospital, where he was found to be suffering from shock; his face was pale, his pulse about 90, and the temperature slightly subnormal. Examination of his abdomen and back showed considerable bruising in the lumbar region and on the front of the left thigh. A small hæmatoma was present on the front of the abdomen about midway between the umbilicus and pubes and over the right Poupart's ligament was an elongated irregular wound about 5 inches long. The abdomen was slightly rigid and tender to the touch. He did not make much complaint of pain. There had been no vomiting. On passing a catheter about three or four ounces of perfectly clear urine came away. There was thus no very clear indication for surgical interference beyond dealing with the wound on his right side and combating the shock which was present. The skin around the wound was cleansed and the edges brought together over a length of gauze. For the shock he was given a hypodermic injection of 4 min. of liq. strychnina and external heat was applied in the form of hot jars. No food was given by the mouth. A careful watch was kept for the further development of symptoms. Strange to say, in view of the grave lesions subsequently found to be present, he passed a fairly good night, sleeping well with some intervals of wakefulness and slight restlessness. In the morning, however, he began to vomit, and the vomiting was repeated two or three times, greenish bile being brought up each time. His condition had now much altered for the worse. He became very restless and complained of much pain and great thirst. His pulse was found to be very rapid, 95 to the half minute. His abdomen was swollen, tense, and tender, especially over the epigastric region, tympanitic to percussion but without loss of hepatic dullness. The temperature was 101.5°. It was evident that a grave abdominal lesion had occurred and laparotomy was at once proceeded with, the provisional diagnosis of ruptured intestine having been made.

Operation.—After the preliminary cleansing of the skin, the patient being under the influence of ether, a median opening was made in the usual situation between umbilicus and pubes. On reaching the abdominal cavity some liquid blood mixed with clots came away and swollen intestine tended to protrude. The distended coil was drawn out and there followed it more blood which was dried up with sponges. On examining now a long transverse rent was discovered in the mesentery about 3 inches from the intestine, cutting off the blood supply of a huge coil of intestine, while above this again was another portion of intestine which was so crushed that its vitality was evidently gone. At this place the intestine was somewhat twisted on itself so that its lumen was interrupted; above this was healthy but distended intestine. No actual perforation was present in any part of the intestine. It was at once determined to remove the whole damaged segment, which was done after tying off and dividing the mesentery which intervened between the rent and that connected with healthy intestine. The upper margin of the rent in the mesentery was not ligatured, hæmorrhage from the vessels having already ceased. Long pressure forceps were then placed on the intestine at the upper and lower limits of the portion to be removed, the latter being about 3 inches from the ileo-cæcal valve. Above and below this the lumen was blocked by lightly tying a piece of rubber tubing passed through a hole in the mesentery about 3 inches away from each clamping forceps. The gut was now cut through close to each forceps, and the segment thus freed removed. The ends were then brought together by a Murphy button, and over the line of union a few Lembert sutures were inserted. No attempt was made to suture the gap in the mesentery, as the patient's condition did not admit of delay. The wound was now closed, about a pint of normal saline solution having been left in the abdomen; the usual antiseptic dressing was applied and the patient sent back to bed. He had borne the operation fairly well considering its extensive character, but for two or three days his condition was such as to cause the gravest anxiety.

Progress.—His pulse-rate continued for some time to fluctuate between 140 and 160, and his face presented an extremely anxious and haggard appearance. His temperature, which on the night of the operation was 100° F., rose to 102° the next morning. The evening after the operation it had fallen to 98°, next morning it was 98° rising to 99.6° on the second evening, since which time it remained normal or within a few points above it. The treatment during the earlier days was as follows, strychnine (m 4 of the liquor) was given hypodermically every sixth hour. On the night of the operation he was given a zymised suppository and this was repeated every fourth hour. In addition nutritive enemata containing a beaten up egg with some brandy and milk was given every night and morning. Nothing was given by the mouth for the first three days, but sips of hot water and a teaspoonful of brandy every hour. On the third day milk diluted with an equal quantity of water was given to him, and panopeptone, a teaspoonful every second hour. This treatment with the

*Read before the Royal Academy of Medicine in Ireland.

rectal feeding was continued for three days, when gradually the diet was increased by the addition of arrowroot, bread and milk, and finally a little beef, the enemata being stopped. His bowels moved spontaneously on the third night after the operation, on the fourth day there was again a motion, followed by two during the night after this; they then moved regularly once a day till the twelfth day when an attack of diarrhoea set in, the patient having six motions in the twenty-four hours. Subsequently there was a great tendency to looseness of the bowels—a condition which lasted for more than seven weeks. This tendency, however, gradually disappeared, so that his bowels acted pretty regularly once a day, and occasionally twice. To all appearance the faeces passed were normal. His appetite was, however, abnormally great for one of his years, notwithstanding which his weight when leaving hospital was only 3st. 6lbs. A later examination made on December 6th, 1900, showed that this fairly satisfactory condition had not been maintained. His appetite still continued to be abnormally great and since leaving hospital he had had attacks of vomiting. This occurred every day for some time then disappeared for a few days again to recur. He suffered, too, occasionally from abdominal pains. The tendency to looseness of the bowels had reappeared, his bowels moving sometimes three or four times in the twenty-four hours. As a rule, they moved twice. The faeces passed were solid, and looked fairly normal, but no chemical analysis was made. The boy, too, was suffering from chorea, a condition which was not present when leaving hospital about five weeks before. He had distinctly lost weight, and might be described as markedly emaciated. These changes, with the exception of the chorea, were attributed to the alteration from hospital to home diet.

A still later examination, April 20th, 1901, showed that his condition was much improved. He had increased in weight and the vomiting had quite ceased. His appetite was still abnormally great and his bowels moved usually twice a day, the stools being frequently offensive.

The operation wound had healed by first intention so that the stitches were removed by the twelfth day, but the wound he had received when run over suppurated and healed tediously by granulation. The date of the Murphy's button being passed cannot be fixed, as unfortunately it was thrown away without having been noticed. That it was passed, however, is quite certain as two or three skiagraphs have been taken revealing all the details of the pelvis and spine, but having no shadow corresponding to the button.

The intestine removed, inasmuch as its lower limit extended to within about five inches from the ileo-caecal valve, consisted entirely of ileum. When measured after removal it was found to be 8ft. 4½ in. in length (255 cm.) and even now, when somewhat shrunken in formalin, measures 8ft. 2 in. When after the first few days succeeding the operation it was seen that the boy was likely to survive the immediate effects of the resection the question arose as to what would be his state thus deprived of such a large amount of actively absorbing surface; a question interesting to the surgeon, and even more so to the physiologist.

In the elucidation of this problem two methods are open to us—the clinical, that is, the study of recorded cases in which considerable lengths of intestine have been removed, and the experimental, animals being submitted to operation in which they are deprived of large portions of their gut. This latter method has been pursued by Senn, Trzebicky and Bonari. Senn, who was the first to undertake the work, used as his material, cats and dogs on which animals he performed extensive resections of the small intestine in seven cases. Of these, however, only two were available subsequently for the purposes of the experiment. In both of these intestine long-continued and eventually fatal marasmus with diarrhoea and increased appetite was the sequel of the resection. As a result of these experiments, Senn came to the conclusion that the excision of more than one-third of the whole length of the small intestine was an operation dangerous to life, productive of marasmus and in this way eventually fatal. He directed attention to a compensatory hypertrophy of the intestinal wall which he found to be present in those cases which had survived for a considerable time. The conclusions of Trzebicky as a result of twenty-eight extensive resections of the small intestine performed on animals were as follows:—Resections of half the small intestine were tolerated quite well. Resections of two-thirds and upwards of the jejunum and ileum made such an inroad on the chemical and mechanical processes of digestion that the prolongation of life became impossible. There was incessant diarrhoea, followed at a later stage by vomiting; food was voided for the most part undigested and, in spite of a craving appetite, the animals perished with symptoms of complete inanition. Trzebicky also observed that the effects of the resection of the beginning of the jejunum were more serious than those of resection nearer the ileo-caecal valve—a result to be expected considering the wider, thicker and more vascular condition of the jejunum. Transferring his results to the human subject and taking 560 cm. (18ft. 5½ in.) as the minimum length of the small intestine, he declared that resection of one-half of it, that is, 280 cm. (9ft. 2½ in.) was quite permissible, provided no further com-

plications were present. Monari goes even a step further. He believes he has proved by his experiments on dogs, that seven-eighths of the intestine can be removed without the production of important interference with metabolism. He asserts that at least one-half of the small intestine may be removed in men without the person's metabolism being very much influenced for the worse. Like Senn, he found hypertrophy and hyperplasia of the gastro-intestinal tract in the dogs which had been operated upon and where the operation was well borne. The mucous membrane was thicker and more richly covered with villi. In those dogs which had died he found the intestine left behind had become atrophic, the atrophy showing itself in wasting of the villi and desquamation of epithelium. We thus see that these observers are not agreed among themselves as to how much intestine may be safely removed from dogs, while in their inferences in applying the results of their experiments to man two agree that removal of one-half is feasible without producing any grave disturbance in assimilation, while Senn would assign one-third as the extreme maximum limit.

I need hardly say in conclusion of this part of my subject that extreme caution is always to be observed in applying the results of experiments on animals to man.

Coming now to the second method of investigation—the clinical—one or two considerations arise which call for some comment before giving the results which may be arrived at by the study of recorded cases. In the first instance, the results obtained cannot be compared merely on the ground of the actual lengths of intestine removed. The excision of a large portion of the jejunum will have much more serious consequences than that of an equal length of ileum, while in a similar manner the loss of ileum will be more felt than that of large intestine, the difference in physiological importance between these being even greater than between ileum and jejunum. Again, as Dreesmann has pointed out, the amount of intestine removed is not of so much importance with regard to the ultimate result of the operation as the amount of intestine which remains behind, and with regard to this latter point in a successful case we must always remain more or less in the dark. No doubt we may subtract the amount removed from the average length of intestine which Treves (as a result of the examination of 100 bodies) places at 22 ft. 5 in. But for the small intestine the variability of the actual lengths is very great thus in Treves's cases there was a difference of more than 16 ft. between the extreme cases which measured 31 ft. 10 in. and 15 ft. 6 in. respectively. Other observers have found equally great variability. The difficulty in making the calculation in Mr. Hayes's case is still further increased by the fact that his patient was a child aged 10. In trying to elucidate the question of the relative length of the intestine in the child and the adult I have been assisted by Professor A. Birmingham, who kindly lent me some books by the authorities on the subject but the conclusions I arrived at are not very illuminating. Briefly there is no proportion between growth in length of the intestine and the age of the patient, growth being in some very rapid in childhood, in others comparatively slow. The intestine, however, does, as a rule, keep growing till adult life is reached so that in Mr. Hayes's case 20 ft. is probably a high estimate. Thus in his case very considerably more than one-third of the intestines had been removed. Dreesmann in 1899 was able to collect 26 cases (including one of his own) in which more than one metre (3 ft. 3 in.) had been removed. To these I am able to add seven more, including Mr. Hayes's case, this bringing the number up to 33.

Placing them in the order of the length of intestine removed there are as follows:

1. Hahn: 80 cm. (32 in.): ileum 20 cm. (8 in.); colon, male, 38 years; recovery, without disturbance of nutrition.
2. Canthorn (New York Medical Journal, 1895): Resected 109 cm. (43 in.) of small intestine from a man aged 49, for sarcoma of the mesentery, ends united by Murphy's button. Patient recovered from operation, but died four months later from obstruction brought about by Murphy's button.
3. R. Budberg-Boeninghausen and W. Koch: Male, aged 68, very robust, 110 cm. (43½ in.) flexure: death on third day from peritonitis, which existed at time of operation.
4. Do, male, 33 years, 110 cm. (43½ in.) ileum; for gangrene after incarceration, femoral hernia; recovery.
5. Trombetta in 1884 resected 110 cm. (43½ in.) of small intestine in a woman aged 40. Recovery (quoted by Ruggi).
6. Budberg-Boeninghausen and Koch: Male, 42 years, 111 cm. (44 in.); flexure, gangrene after twisting; recovery.

7. Marston resected 112 cm. (44 in.) for sarcoma of mesentery. Death five months afterwards from perforation due to Murphy's button.
8. Billroth: Female, 52 years, 113 cm. (45 in.) small intestine, on account of fixation by the extirpation of a fibroma size of child's head. Death from collapse.
9. Troje: 115 c.m. (46 in.), female, 25 years, for four ring-like tuberculous strictures. Result, fistula.
10. Elliot (*Annals of Surgery*, January, 1895) resected 124 cm. (4 ft. 3 in.) in a man aged 25, for infarction due to thrombosis of the superior mesenteric veins. Patient was in good health two years after.
11. Roux (*Semaine Médicale*, 1892) resected 124 cm. (4 ft. 3 in.) of intestines for a lipoma. Recovery.
12. Budberg-Boeninghausen and Koch, 125 cm. (4 ft. 1 in.) flexure. Death from already existing peritonitis on the same day.
13. Do., 125 cm. (4 ft. 1 in.) ileum; death on day of operation from already existing peritonitis.
14. Obalinski: 126 cm. (4 ft. 2 in.), ileum, for gangrene. Death in twenty-four hours.
15. Studsgård: 128 cm. (4 ft. 3 in.) jejunum for invagination. Death five days after from peritonitis.
16. Schlange: 135 cm. (4 ft. 6 in.) ileum, gangrene. Recovery without disturbance.
17. Braun: 137 cm. (4 ft. 7 in.). Small intestine, on account of circumscribed peritonitis. The woman recovered in the beginning, but soon the appetite began to fail and the wasting continued to increase; oedema of the lower extremities set in, and four months after the operation death took place. Post-mortem report: shrinking of kidney, but otherwise nothing abnormal.
18. Kosinski: 143 cm. (4 ft. 9 in.) ileum, gangrene from hernia, death from collapse.
19. Müller: 12 years old boy, 150 cm. (5 ft.) ileum, caecum, and colon for invagination; for 7 days normal, then rise of temperature and pulse-rate, vomiting, diarrhoea, death. Cause of death, according to Professor Ziegler's view, filling of the intestine with air and fluid.
20. Kocher: 160 cm. (5 ft. 4 in.) ileum, gangrene. Recovery without disturbance.
21. Budberg-Boeninghausen and Koch: 175 cm. (5 ft. 10 in.) ileum, caecum with appendix and ascending colon; artificial anus formed; closed 2½ months after operation. Recovery without disturbance.
22. Wallstein: 175 cm. (5 ft. 10 in.) ileum for strangulation, recovery without disturbance.
23. Schwalbach: 183 cm. (6 ft. 1 in.) ileum, recovery.
24. Hinterstößer: 186 cm. (6 ft. 2 in.) ileum and part of jejunum for incarceration, recovery without disturbance.
25. Schlatter resected 292 cm. (6 ft. 4 in.) of ileum for gangrene due to the intestine protruded through an abdominal wound being grasped tightly by the skin. Recovery from the operation was uneventful save for an attack of urticaria which appeared on the fifth day, disappearing on the tenth. This was probably owing to the interference with the assimilatory area due to the operation. His weight increased in the second month after the operation from 140 to 165 pounds. He was then (two months after the operation) feeling perfectly well there being no tendency to diarrhoea. An examination of his ingesta and ejecta for ten consecutive days showed, however, that his appetite was abnormally great, that whereas the amount of undigested albuminous material in the faeces was slightly above the normal percentage, the amount of fat similarly lost was very much more than normal. The subsequent history showed that the man was not fit for heavy work, and that he required much more nutritious food than the working people of his own class doing their full work. Other food caused abdominal pains.
26. Koeberlé: 205 cm. (6 ft. 10 in.) small intestine for four strictures, artificial anus closed after six weeks. Recovery without disturbance.
27. Kocher: 208 cm. (6 ft. 11 in.) for tearing of small intestine. Recovery, but subject to diarrhoea if not very careful of diet.
28. Dreesmann: 215 cm. (7 ft. 2 in.) ileum for gangrene. Recovery, but slight diarrhoea.
29. Shepherd: 224 cm. (8 ft. 2 in.) ileum. After operation thin stools, but increased 40 lbs.
30. Hayes resected 255 cm. (8 ft. 4½ in.) ileum for laceration of mesentery with crush of intestine in a boy, aged 10. During recovery there was a great tendency to diarrhoea which lasted for eight weeks. At a later period a tendency to diarrhoea recurred. There was also occasional vomiting, and the patient suffered from chorea.
31. Fantino: In a woman, aged 60, 310 cm. (10 ft. 4 in.) ileum, for gangrene from incarceration, healing by first intention. The further study of the nutrition in the intestinal canal showed that the same was not complete. Substances introduced appeared rapidly in the stools which were also frequent and rich in nitrogen, fats and water. Nevertheless, in the beginning increase of weight, also after a year no wasting since the loss was compensated for by increase of nutritive materials.
32. Ruggi: Boy, aged 8, 330 cm. (11 ft.) small intestine for circumscribed peritonitis. Recovery and good health one year after.
33. Obalinski: 365 cm. (12 ft. 2 in.) practically the whole. Death in 22 hours.

In analysing these cases we find that death quickly followed the operation in 9 cases. Three survived the operation for about four months. As regards the site of intestine removed in the 21 cases which recovered in two it consisted partly of colon, so that it is not to be wondered at that ill-effects were absent in these subsequent to the operation. In one ileum with a portion of jejunum (how much is not stated) was removed, the total amount being 186 cm. In this case no ill-effects followed. In the remaining cases it is, as a rule, expressly stated that it was ileum which was removed, so that, generally speaking, in analysing these results we should remember that it is resections of the ileum with which we are principally dealing.

One of the most striking features in the subsequent history

of those who survived is that whereas some showed symptoms of intestinal disturbance chiefly in the form of a tendency to diarrhoea, these have been absent in Ruggi's case in which the greatest length of intestine (330 cm.=11 ft.) has been successfully removed. Leaving for a moment this case aside we find with regard to the others that if we take a length of 200 c.m. (6 ft. 6½ in.) as a dividing line they pretty nearly fall into two classes. Thus, in the 7 cases which showed subsequent disturbance the length of the intestine removed was over 200 c.m. with two exceptions. In one of these (Braun) the length of intestine removed was only 137 cm. (4 ft. 6 in.) but here there was the complication of contracted kidney so that much weight cannot be laid on it. In the other (Schlatter) the amount removed fell short of 200 by only 8 cm. (3 in.) and in that case, too, it is distinctly stated, that the intestine was measured after it had considerably shrunk. The 14 cases which showed no untoward symptoms had lost less than 200 cm. with one exception, and in this case (Koeberlé) the amount removed exceeded the standard by only 5 cm. (2 in.). The teaching of clinical experience in adults would thus seem in cases uncomplicated by other lesions to point towards 200 cm. as being the limit about which the danger line fluctuates. In adults when the intestine removed is less than this intestinal disturbance will probably be absent and when greater present. Children must apparently be placed in a different category, for in a child, aged 8, 330 cm. (11 ft.) have been removed without interference with nutrition or intestinal disturbance. The explanation seems to lie in the circumstance pointed out by Monari that in those animals which showed no intestinal trouble after operation a marked hypertrophy of the intestine was found to have taken place. It is easy to understand that such a hypertrophy will occur much more readily in a child than in an adult, and in this probably lies the key to the mystery that in the most extensive resection ever successfully done no disturbance of digestion followed, or possibly Ruggi's case had an abnormally long intestine. Another very remarkable fact is also brought to light, namely, that even in those cases where diarrhoea occurred nutrition could still be kept up to a good level by giving an abundance of nutritious food. If, now, we accept Treves's measurement of 22 ft. 5 in. (683 cm.) for the small intestine as approximately accurate, and take 200 cm. (6 ft. 6½ in.) as the limit beyond which we cannot safely go in the removal of portions of the intestine, we see that the latter is considerably less than one-third of the total length. Thus Senn is the most accurate of the experimenters as regards his deduction in reference to man, for he it was who asserted that resections of over one-third of the small intestine are likely to be accompanied by grave digestive disturbance probably terminating in death.

In conclusion, I would point out that although the interest of the subject is considerable the question of exactly how much intestine may be removed without damage to nutrition concerns more the physiologist than the surgeon. The latter in these cases is confronted with a problem which admits of but one answer. His patient is in imminent danger of death and the surgeon's first duty is to save his life. If he is dealing with gangrenous intestines, as is most commonly the case, he must remove the whole of it; whether it measures a few inches more or less than 200 cm. he will not stop to inquire; the leaving behind of the smallest portion of gangrenous gut means death, its complete removal may mean life. When he has got his patient safely back to bed after the operation he may in his leisure moments measure the intestine removed and assist his prognosis as to the ultimate result by remembering the points which I have here endeavoured to bring forward.

A CASE OF INTUSSUSCEPTION IN A PATIENT AGED 72: LAPAROTOMY: RECOVERY.

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IN the BRITISH MEDICAL JOURNAL of September 7th, there is in Mr. Bernard Pitts's paper a list given of all cases of intussusception treated at St. Thomas's Hospital from 1875 to 1900 inclusive. Amongst these 115 cases in the list there is