This, then, is a brief outline of a subject about which very much more might be written, and also in connexion with which very much more work remains to be done. I expect that in the near future we shall be able to distinguish different forms of catarrhal irritability of the colon, separating those of rheumatic or uric acid origin from those of influenzal origin, and both again from those due to intestinal micro-organisms.

A CASE OF INTUSSUSCEPTION ACCOMPANIED BY POLYPUS AND STRICTURE:

PERFORATION: RESECTION: RECOVERY.

By R. V. DE ACTON REDWOOD, M.R.C.S.,

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In the following case the history, taken together with the condition found, leads me to conclude that acute ensued upon chronic intussusception.

An unhealthy, neurotic, anaemic woman, aged 37, married, with five children, and living in a two-roomed house, had complained of indefinite abdominal pain for about six months. She often allowed her bowels to remain unopened for a week; her meals were most irregular, and she was in the habit of chewing quantities of raw rice and oatmeal. When seen from time to time she refused to allow any examination to be made.

History of Present Illness.

When seen she had severe abdominal pain, referred to the umbilicus, coming on in paroxysms, and inability to retain food. The bowels had not been opened for a week; there was no vomiting when no food was given; pulse 100; temperature normal. Nothing could be made out from the abdomen, and examination by rectum or vagina was refused.

Enemata were given every six hours for thirty-six hours; a mixture was also given. The enemata produced two actions; the patient gradually felt better, and nourishment could be given by the mouth.

On the fourth day she had another similar attack, which passed off in forty-eight hours. On the seventh day, in my absence, Dr. T. H. Redwood saw her; she said she was better. On the eighth evening I found she had been vomiting for twenty hours, and that for the last ten the vomit had been faecal. She was regurgitating mouthfuls of liquid faeces at short intervals. Pulse 140. It took another four hours to persuade her to submit to operation that night.

Operation.

After being admitted, she was given an enema, with no result; saline solution and adrenalin were infused hypodermically, and a nutrient enema with brandy was given also. Her general condition considerably improved, and the vomiting ceased; there was practically no distension, and nothing could be made out on abdominal examination. On rectal examination, a lump could be made out in Douglas's pouch; a catheter was passed; the stomach was not washed out, and a general anaesthetic was decided on; the pulse was 120. The anaesthetic used was C.E., which was taken very well. The abdomen was opened in the middle line from the umbilicus to the pubes. A little fluid escaped on opening the peritoneum; the gut was fairly empty. On putting the hand into Douglas's pouch, the lump was easily found, and proved to be an intussusception of the lower end of the ileum about 18 in. long, and a hard lump could be felt at its apex. With some difficulty, owing to the size of the apex, it was reduced, the abdominal cavity having been well shut off with gauze before commencing reduction. There were practically no adhesions, but two yellow spots and a perforation appeared on the receiving layer, and from this point on it was slightly adherent, and still more so at the apex, which was reduced with difficulty. Here there were two more yellow spots and two perforations on the receiving layer. A polypus could be felt inside the gut, which was markedly dimpled and thickened at the point of attachment. There was an annular stricture beyond the polypus and a great difference in the size of the gut on either side.

The patient's condition having improved, it was decided to resect and laterally anastomose the shut ends with Murphy's button (third size). This was done 3 in. beyond the stricture and 3 in. beyond the unhealthy spot mentioned. About 2 ft. of intestine was removed. More subcutaneous saline and a hypodermic of adrenalin were now given. The halves of the button were pressed together firmly enough for good coaptation of the opposing surfaces of gut wall, but on removing the clamps there was slight leakage in one spot; they were pressed more firmly together, and reinforcing sutures put in; this may account for the button coming away on the ninth day. A little fluid was found in Douglas's pouch. The abdomen was closed, and a large Keith's tube left in above the pubes, with a gauze wick. The preparation of operation area and operation took about an hour. The patient never vomited again from the time that she was put on the table until she was well. An injection of streptococcic and coli vaccine was given.

The wick was changed every six hours, and a good deal of fluid came away with no smell. More saline and adrenalin were

given, and she was kept up in Fowler's position. At the end of forty-eight hours there was some distension and pain, but no vomiting. Pulse 120; no flatus passed. A turpentine enema was given and not returned. A long tube was passed, and part of the enema came away, but no flatus, and distension was not relieved. Sodium sulphate 3vi in 3x iced water was given slowly, and liq. strych. hyd. (q.q.h.) hypodermically. Liquid faeces were passed, and from that time the patient made a good recovery, having about four actions daily, the discharge from the tube ceasing about the ninth day, on which day the button came away. The patient for the first eight days in her own house had been on a hard kitchen armchair, with her legs up day and night; she had refused to move out of it. She developed a large sore in consequence over her sacrum, which is now rapidly filling up.

On opening the gut removed, the polypus, as big as a large prune, was found to be gangrenous; a section through the base of it, cut and stained here by Dr. Scudamore, seemed to be a columnar-celled carcinoma. The only gland seen when removing a V-shaped piece of mesentery looked healthy.

The point that strikes me about the case is that this woman is about the last in the district I should have expected to stand an illness of this sort—unless her previous state in some degree could have hardened her to the condition of things found at the operation.

IMPACTION OF GALL STONE IN SMALL INTESTINE: LAPAROTOMY: RECOVERY.

By HENRY ROSS, M.B.ABERD.,

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The following case is of interest, not only on account of its rarity, but because the symptoms were so slight and insidious, and there was an entire absence of any previous history of hepatic colic or pain. The recovery after so long a period of complete obstruction before relief was given is noteworthy. The septic middle-ear abscesses were presumably caused by the faecal vomiting.

I was summoned to Mrs. L. B. on the evening of November 23rd, 1908, who was said to be suffering from colic. She was a very stout woman and was sitting by the kitchen fire and not showing any marked symptoms of distress. She complained of intermittent pain about the umbilical region with nausea and vomiting.

History.

She stated she was aged 65, and married, but with no children. She had always enjoyed good health, and till early that morning was in her usual health, taking food well; the bowels acted regularly as a rule, but had only moved slightly on the evening of November 21st. Soon afterwards slight intermittent griping pain set in, but did not become severe until the early morning of November 23rd; this, however, was not so acute as to prevent her attending to her household duties until I saw her in the evening.

The patient being fully dressed, I had not an opportunity of examining the abdomen, nor did I think the symptoms urgent enough to require it. I treated the case on the usual lines, prescribing calomel, 5 grains, and bismuth and soda for the sickness.

Next morning I found her in bed and the symptoms much the same, tongue clean, temperature and pulse normal, but no action of the bowels had taken place. There was nothing to indicate the cause, and, regarding it as possibly faecal obstruction, I ordered copious enemata, but with scarcely any result.

As the symptoms did not assume great urgency, that evening I gave her more calomel, to be followed by a brine enema in the morning, but by that time the abdominal pain became more violent and the vomiting distinctly faecal. I asked my colleague, Dr. Box, to see her with me, and we agreed that some form of intestinal obstruction, needing surgical interference, was present, and she was admitted into the hospital.

She absolutely refused to have anything done in the way of operation. The symptoms got more and more urgent, till the patient was in *extremis*. By the seventh day of the obstruction the distress became so great that she voluntarily asked me to try and do something to relieve her.

On the afternoon of November 28th, I opened the abdomen in the middle line, and on passing my hand over the intestines found the cause of the obstruction in the small intestine about 18 in. above the ileo-caecal valve. After withdrawing the bowel and clamping it above and below, I surrounded it and the wound with sterilized swabs, turned the intestine back over the end of the stone, and incised the bowel enough to push the stone through the opening endwise. I sewed up the wound with a double row of silk sutures, first continuous, second interrupted (Lembert). After washing the parts with weak iodo solution and then saline, the bowel was returned and the abdominal wound sutured in the usual way.

Her recovery was slow, owing partly to the delay in operating. An abscess formed in the wound, and subsequently she had double ear abscess.

The stone was cone-shaped, and represented a cast of the gall bladder, measuring in its long axis $2\frac{1}{2}$ in., and in the transverse diameter $1\frac{1}{2}$ in.

I must acknowledge the valuable assistance given me at the operation by Dr. Hewer and by Dr. Box, who administered the anaesthetic, which, from the regurgitation of faecal matter, was a very risky and unpleasant task.

EMPHYEMATA ASSOCIATED WITH THE BACILLUS COLI: TREATMENT BY ANTITOXIN.

By J. SIDNEY PEARSON, M.A., M.D. CANTAB.,

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As antidiphtherial serum is now being frequently administered by the mouth, the following cases may prove of interest, not only because of their unusual character, but because it was possible to demonstrate from day to day the direct effect of the antitoxin treatment.

F. C., a boy aged 7, was admitted on October 15th, 1908, under Dr. Coutts, with dyspnoea, cough, and very fetid breath. He had been attending hospital on and off for six years, beginning with an attack of pleurisy. When in the hospital five months previously he had shown signs of bronchiectasis involving the left base. Dr. Coutts still inclined to this diagnosis, for although on examination impaired resonance and diminished breath sounds were found all over the left side of the chest, yet from time to time the boy expectorated copious, very foul sputum. He had night sweats, and was losing weight, yet there was no history of phthisis. The heart's apex was felt to be in the fifth intercostal space, about $\frac{1}{2}$ in. internal to the nipple.

On November 19th a red, tender, fluctuating swelling appeared immediately below and to the left of the nipple. Under chloroform I made an incision over this and found the sixth rib necrosed. The diseased portion was cut away, when immediately there was an escape of foul smelling gas, followed by about 4 oz. of pus, resembling pale anchovy sauce—obviously pus that had intimately mixed with blood. I felt the lung to be much shrunken and fibrosed, but could detect no rent in its substance. Streptococci and *Bacillus coli* were found in the pus. On November 19th and on each of the two following days 10 c.cm. of polyvalent antistreptococcal serum were given by the mouth. The discharge from the wound, however, still continuing very foul and profuse, a week later I ordered 25 c.cm. of anticoli serum to be administered by the mouth. Two days later the discharge was less profuse and not nearly so offensive, and ten days later had quite stopped.

On December 20th the wound opened and again discharged offensive pus swarming with the *Bacillus coli*, so that I repeated the dose of 25 c.cm. anticoli serum, and the discharge quickly became less in amount and lost its fetid odour. I examined the discharge daily, and whereas before the serum had been given the bacilli were very active, yet twenty-four hours after its administration they were seen to be very sluggish, of large size, and in greatly reduced numbers. Two days later I could find no *Bacillus coli* in the discharge. The boy's general condition had correspondingly improved, and the wound closed.

On January 10th, 1909, it again broke open and discharged pus as before, this time containing both streptococci and *Bacillus coli*. Both antitoxins were administered simultaneously by the mouth, and two days later Dr. Saunders reported that he could find no bacilli and only a few short chained streptococci. The antitoxins were given again, and henceforward the wound healed and the boy made a rapid recovery. I saw him on May 24th—six weeks after his return from our convalescent home—still looking the picture of health, having put on several pounds in weight.

Empyemata associated with the *Bacillus coli* and without any abdominal mischief are very rare. This case gave no signs of any extra-thoracic trouble. Moreover, whilst he was in the hospital, another boy—C. F., aged 5—was admitted in extreme dyspnoea, and died on the same evening, a few hours after a large empyema had been opened. The pus from this case was very foul and contained the colon bacillus. At the *post-mortem* examination the pericardium also was found full of pus, but no abdominal lesion of any kind was discernible.

G. S., a boy aged 10, was admitted with a subdiaphragmatic abscess that had extended into the right pleura and lung. The stench from his breath was unbearable, but twenty-four hours after the oral administration of 25 c.cm. anticoli serum it was quite sweet. The boy was in the hospital for three months, and made a very slow recovery. His full history is out of place here, but after his abscess had been opened I had two occasions to watch the effect of the anticoli serum upon the bacilli. Within twenty-four to thirty-six hours the bacilli become very sluggish, and the greatly reduced numbers pass into the large involution stage.

I have tried the anticoli serum on one case of acute gangrenous appendicitis, but without obvious result either before or after operation; yet I think investigation in this direction is desirable.

In no case was the antitoxin given hypodermically, and at the present time all serums are given by the mouth at the East London Hospital for Children, except to cases of very urgent laryngeal diphtheria, when it is given subcutaneously; even in these cases I doubt whether it acts more quickly or directly.

Children take antitoxin very well when administered with about double the quantity of warm milk. I have never known the dose vomited.

Since writing the above I notice, in *Lancet*, June 5th, 1909, p. 1580, Drs. Hale White and Eyre report two cases of empyema associated with the *B. coli* treated by vaccines. They state that the improvement after administration of the vaccine was immediate and remarkable. In the cases recorded it was equally so. Both the first and third cases were given up as hopeless, and they appeared to be dying, yet after the antitoxin they both took a new lease of life. Certainly antitoxin is more readily obtained than vaccine, and when the former acts so efficiently I see no reason to delay while a vaccine is being prepared.

For permission to publish these cases I am much indebted to Dr. J. A. Coutts and Mr. Warren.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

QUININE IN SYPHILIS.

IN 1905 the subject for the triennial Alexandra Memorial Prize, open to army and navy surgeons, was "Syphilis in the army and its influence on military service: its causes, treatment, and the means which it is advisable to adopt for its prevention." The essay submitted by me was later published in book form in 1907, under the title: *Syphilis in the Army*.¹ On page 52 it is stated that: "Quinine in dilute acid solution is often most valuable—precedent to, or immediately after, the first mercurial course, and in cachectic cases. Whether it exerts a specific action on the spirochaete of syphilis, as on the malarial parasite, is uncertain, but I think it should be invariably given if there is an associated malarial history or syphilitic fever. Such fever is common with the onset of rash, and in the later stages with the septicaemia due to necrosing bone or tissues. As early syphilis is associated with a loss in numbers of the red blood corpuscles and in the amount of the haemoglobin in those cells, quite possibly its chief action may be in overcoming this degenerative action, and thus assisting the blood to better deal with the inroads of the virus in the early and more remediable phases of the disease, by increasing its phagocytic power, or by the formation of antibodies. Further, any drug which tends to reduce the number of spirochaetes in the blood in the early stages, will consequently lessen the amount of toxin which can later injure the central nervous system and cord."

In an article written at the request of the editor on the treatment of syphilis, in the November and December 1908 numbers of the *British Journal of Dermatology*, it is further stated: "Whether quinine exerts a specific action on the *Treponema pallidum* as on the malarial parasite is uncertain, but I always temporarily 'substitute' it for mercury if there is an associated malarial history, or if syphilitic fever is present."

During sixteen years' specialized work on venereal diseases in the army I have extensively used quinine, and before the days of the demonstration of the protozoan of malaria by Ross, and prior to Schaudinn's valuable discovery of another protozoan, the *Treponema pallidum* of syphilis. The use of quinine, however, is now placed on a more "scientific" basis. My attention was chiefly directed to this drug in India, where cases of syphilitic fever were not infrequently sent into hospital as ague, or vice versa, or the two diseases co-existed. The drug acts most beneficially in any "septicaemic" state with fever, whether such be due to gonorrhoea, syphilis, or enteric fever. Quinine, mercury, and opium judiciously used are veritable sheet anchors in treating early syphilis. Santogen and arsenic are most useful adjuncts. The whole category of

¹ *Syphilis in the Army*. 1907. London: John Bale, Sons and Danielsson.