scopical examination of films from the fæces showed in each case a large number of Gram-positive diplococci closely resembling the pneumococci, and short chains of oval diplococci were also present. Plate culture on bile-salt agar showed in 24 hours coliform colonies; no other colonies developed in three days, but the organism has been found to grow on this medium. On lactose-litmus agar in 24 hours there were a large number of minute transparent colonies, becoming in 48 hours gradually more opaque and about double the original size. Further incubation did not seem to increase the size of the colonies which always remained discrete.

The cultural reactions were as follows:—

Peptone broth, 24 hours, growth with deposit.	Maltose, acid.
Agar, 24 hours, minute transparent colonies.	Mannite, acid.
Gelatin growth, not liquefied.	Glycerine, acid.
Lactose, acid.	Milk, clotted in 14 days.
	Peptone water, 48 hours, no indol.

Blood from a female patient, who subsequently died, was procured, and at once agglutinated the enterococcus in dilutions of 1 in 30 to 1 in 120. Owing to pressure of work and shortage of staff at the workhouse hospital no further specimens of fæces were sent for examination.

Two Isolated Cases.

Two isolated cases, due to this organism, in which the clinical symptoms very closely resembled typhoid fever, may also be quoted, one case having been successfully treated by an autogenous vaccine.

The first case was that of a young woman where the provisional diagnosis lay between typhoid fever (clinical symptoms, persistent raised temperature of 103–104° F., marked general exhaustion, with abdominal tenderness and diarrhoea) and septicæmia. A negative Widal reaction against typhoid and paratyphoid bacilli was obtained (patient had been ill for about three weeks). Cultural examination of the fæces gave a very abundant growth of the enterococcus and no bacilli of the typhoid-dysentery group were found. Vaccine treatment was refused, and the patient was seriously ill for many weeks with a protracted convalescence.

The other case, which I am permitted to quote by the kindness of Dr. Winstan St. A. St. John, of Derby, was that of a married woman, a trained nurse, who during the war had been actively engaged in nursing and then went on a tour in France and Germany in 1919. While in France she became ill, and though partially protected by inoculation in 1916 against typhoid and paratyphoid bacilli A and B, the provisional diagnosis of her illness lay between colitis and typhoid fever. The clinical symptoms were those of persistent raised temperature, diarrhoea, and abdominal pain and tenderness, with much exhaustion. Patient had been ill for 25 days when her blood was sent for examination. The Widal reaction showed slight agglutination in dilutions of 1 in 30 and 1 in 60, probably due to the previous protective inoculation, but was completely negative in higher dilution, and also completely negative as regards paratyphosus bacilli A and B.

Bacteriological examination of the fæces gave a practically pure culture of the enterococcus, and no bacilli of the typhoid-dysentery group were found. An autogenous vaccine was prepared from the enterococcus and administered in doses gradually increasing from 50,000,000 cocci every fifth day for five weeks by Dr. St. John. Patient had a slight reaction to the vaccine after the first and second injection, but none thereafter, and made a good recovery, prolonged somewhat by the fact that she had suffered from enteroptosis for years. This patient had, seven months afterwards, symptoms of appendicitis, and the appendix was removed. Emulsions made from the appendicular contents and plated on lactose-litmus agar gave no growth of the enterococcus.

Conclusion.

These notes on cases which have cropped up during six months' routine work suggest the advisability of a definite search for the enterococcus in all conditions with obscure clinical symptoms somewhat resembling typhoid fever.

DEATH OF SURGEON-MAJOR R. R. SCOTT.—Ralph Robert Scott, M.R.C.P. (Irel.), L.R.C.S. (Irel.), Surgeon-Major, Army Medical Service (ret.), has died at his residence in Bath in his eighty-ninth year. The deceased officer was assistant surgeon to the 16th Regiment and on the staff during the Crimean War. In the Indian Mutiny he was attached to the 8th Hussars and was on the staff in Sir James Hope Grant's flying column, being present at the relief of Lucknow. After the Mutiny he served in India and the West Indies. Surgeon-Major Scott had resided in Bath for the past 25 years and was highly respected. One of his sons lost his life on the *Lusitania*.

Clinical Notes :

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TWO CASES OF INTESTINAL OBSTRUCTION.

BY W. E. TANNER, M.S. LOND., F.R.C.S. ENG.,

SURGICAL REGISTRAR, TUTOR, AND DEMONSTRATOR OF ANATOMY, GUY'S HOSPITAL.

Two unusual cases, (1) obstruction of the small intestine by a large hair-ball, and (2) strangulation of the small intestine by the appendix acting as a band, are here recorded.

CASE 1. Obstruction of the small intestine by a large hair-ball.—E. W., a girl aged 7, was admitted to Guy's Hospital on March 12th, 1920. She had been healthy until a year before admission, when she had an attack of abdominal pain and sickness, at first suspected to be due to appendicitis, but diagnosed later as gastritis. She recovered from this and was well until March 9th, 1920, when she had an attack of acute abdominal pain with vomiting of green fluid. The bowels opened twice on March 9th, and on March 11th an enema was given with a small constipated result. The vomiting continued until the evening of March 11th. The abdomen was distended, and paroxysms of pain were accompanied by peristalsis of distended bowel. On admission, pulse 130, temperature 97° F.; the abdomen was distended around the umbilicus, not in the flanks, with visible peristalsis of the small intestine. On rectal examination the house surgeon, Mr. V. E. Lloyd, felt a hard movable lump in the right iliac fossa. Intestinal obstruction was diagnosed, the cause being obscure.

Operation.—A right paramedian laparotomy was performed. On opening the peritoneum clear fluid escaped; the appendix was normal. The small intestine was distended, the cæcum collapsed, and a hard movable mass was felt in the lumen of the ileum, 4 inches from the ileo-cæcal valve. The mass could not be broken up, so it was milked through the ileo-cæcal valve and removed through an incision in the anterior wall of the cæcum, because it was thought to be too large to pass the narrow part of the pelvic colon. The cæcum and parietal wound were closed. The mass was found to be a spherical hair-ball 2 inches in diameter, composed of the child's own hair matted together by intestinal fluid and a small amount of faecal matter. The mother said that the child had habitually bitten her hair since the age of 2. Neither the mother nor the child had observed if hair had been passed per anum before the onset of intestinal obstruction or after the attack of gastritis a year before. The child was discharged in good health three weeks after the operation.

In the literature¹ there are many records of hair-balls in the stomach, but I have found no example of a hair-ball causing obstruction in the small intestine.

CASE 2. Strangulation of the small intestine by the appendix acting as a band.—Henry J., age 64, was admitted to Guy's Hospital on April 13th, 1920. He had suffered from asthma for 35 years. When screwing a bolt on to some couplings on April 10th he was seized with acute abdominal pain. He went to bed, but the pain persisted. The bowels had not acted since, but there was no vomiting.

On admission, temperature 97° F., pulse 80. A tumour was felt just below and to the right of the umbilicus. There was tenderness and rigidity over the tumour, but elsewhere the abdomen was supple. Appendicular abscess was diagnosed and a right paramedian laparotomy was performed. The great omentum was lifted from the surface of the tumour; pus escaped, and the lower 6 inches of the ileum were found to be gangrenous. The appendix passed upwards and to the left, and was attached by its tip to the front of the mesentery. The gangrenous intestine was lying between the appendix and the front of the mesentery, so that the former acted as a band, strangulating the lower 6 inches of the ileum. A lateral anastomosis was made between the transverse colon and a loop of ileum just proximal to the gangrenous portion, and the great omentum was sutured over the anastomosis. The appendix was then removed and gangrenous ileum resected, the open ends of bowel being closed by double purse-string sutures. The bowels acted on the second day after operation. There was slight superficial suppuration of the wound at the end of four days, but this subsided and the patient was discharged on May 10th.

I am indebted to Mr. R. P. Rowlands, surgeon to Guy's Hospital, for permission to publish these cases.

HAIR-BALL IN THE ILEUM CAUSING OBSTRUCTION.

BY HAROLD R. GIBSON, M.D., CH.B.,

RESIDENT MEDICAL OFFICER, LONDON TEMPERANCE HOSPITAL.

So far as I am aware this is the youngest case recorded in the English literature of a hair-ball in the ileum causing obstruction.

A boy, aged 6 years, was admitted to the London Temperance Hospital on Jan. 24th with a history of vomiting for two days, previous to which he had been quite well. The bowels had not

¹ Wien. Klin. Woch., Nov. 16th, 1899. Index Medicus since 1903.

moved the previous day, but a few hours before admission he had passed a small constipated motion.

On admission he complained of slight pain in the umbilical region, but there was no tenderness or rigidity, and the abdomen moved freely with respiration. On palpation a tumour, which was slightly movable from side to side, could be felt in the right iliac fossa. The temperature was 98° F. and the pulse 94. An enema gave a very slight result. The child slept quietly all night. The following morning another enema was given and some small hard faeces were passed, but there was no blood or mucus. The abdomen was slightly distended, and coils of intestine were visible in the epigastric region.

Operation.—An operation was performed by Mr. James McClure. The abdomen was opened by a right paramesial incision. A tumour was found lying over the appendix, and at first sight appeared to be an enteric intussusception, but was found to be a mass in the ileum. It was movable in the intestine upwards but not downwards. It was moved up to a healthy part and the intestine opened by a longitudinal incision and the mass removed. The wound in the intestine was sutured and the abdomen closed.

The mass was 2 in. long, 1½ in. deep, and ¾ in. across, and consisted of hair tightly packed and arranged in concentric layers. In the centre it contained granular white matter resembling sebaceous material. The child made an uninterrupted recovery.

The patient, though a boy, had long hair, and on questioning the mother it was found that he had been in the habit of putting his hair into his mouth and eating it.

A SUCCESSFUL CASE OF LATERAL INTESTINAL ANASTOMOSIS THROUGH THE VAGINA.

By J. G. WATKINS, M.R.C.S., L.R.C.P. LOND.

ANASTOMOSIS in the vagina, though not desirable as a set operation, or if instruments for a laparotomy are within reach, may be a useful procedure in an emergency similar to the one here recorded. It may be comforting to know that a tragedy can be averted by its use, with the help of suture materials that are to hand in the meanest cottage.

The patient, a 2-para, youngest child 7, aged 44, was four months pregnant. The urine was laden with albumin, and as in her previous pregnancies she had had severe albuminuria, and two years ago had undergone a ventrofixation, it was decided to empty the uterus. On Feb. 24th, 1920, under an anæsthetic, the cervix was dilated to 22 Hegar. The dilatation was very easily accomplished, but little force being needed. I then punctured the membranes, and proceeded to extract the foetus piecemeal with ring forceps. Everything appeared to be normal, except that on three occasions I brought out pieces of fat about the diameter of a sixpence.

Having cleared out the placenta and the whole foetus, except the head, I drew down a tough, flat, shiny substance, which I took to be part of the neck, and I drew hard on it to extract the head. It appeared to stretch considerably, but for some time I suspected no abnormality, and not getting a very firm purchase I put a spare vulsellum through it. I then discovered that the flat band was a coil of empty intestine, without a mesentery, which must have been partly torn off when I observed the bits of fat and partly dragged from its attachment. I then for the first time explored the cavity with my finger and found a rent about 1½ or 2 inches long, running up from the internal os on the left side. The head was still in the uterus, but after an attempt to get a firm hold of it, it disappeared.

The patient's pulse now failed considerably, and it was thought impracticable either to remove her to a hospital or to wait until instruments for a laparotomy could be collected and sterilised, so some cotton and a sewing-needle were boiled and I made a lateral anastomosis after excising six inches of bowel and turning in the ends. After swilling it liberally with hot water I returned it through the rent into the abdominal cavity. No further search was made for the head, but a couple of strips of boiled lint were passed up through the laceration, and the patient was returned to bed and placed in the Fowler position. Later in the evening 1 c.cm. of pituitrin was given intramuscularly.

The patient's condition during the first week was very satisfactory; temperature not higher than 101° 2' F., pulse 105 to 130. A very slight natural action of the bowels took place on the fourth day. On the fifth day she was given calomel gr. iii. in divided doses with no result, and on the eighth day ol. ricini ʒi., after which she had a rigor, with much abdominal pain, but the bowels were freely opened. The following day the temperature was 102° 6', but came down to a general level of 100° 6' for the week, with frequent loose actions of the bowels. On the twelfth day she had slight phlebitis and thrombosis in the right leg, which soon cleared off. The third week began with the discharge from the vagina of two pieces of foul-smelling slough, each about 3 in. by 1 in., and gripping abdominal pains. At this time, too, faeces began to pass through the vagina, and on the seventeenth day, as there was pain in the rectum, I examined it and drew out two fetal frontal bones, the remaining cranial bones following during the next two days. After the end of this week no faeces passed p.v., and during the fourth week the patient suffered with constipation, accompanied by pain and dilatation, all relieved by a turpentine enema.

Since then her general condition has steadily improved, and now, at the end of two months, she is getting about, and the bowels act about thrice daily with liquid paraffin alone.

Remarks.

The case seems to me to be worth reporting, as it taught me some valuable lessons. Firstly, to be on

guard in future when the cervix dilates with exceptional ease. Next, instead of scrupulously keeping the gloved finger out of the uterus to sweep it round above the internal os, to make sure that there is no laceration. Thirdly, to beware of anything in the uterus which is not obviously foetal or placental. The intestine, as it came down, was not in the least like gut, but the bits of fat should have given me warning.

Bootle.

A CASE OF RIGHT MASTOID SUPPURATION CAUSING LEFT-SIDED FACIAL PARALYSIS.

By E. WATSON-WILLIAMS, M.C., M.B., B.C. CANTAB.,
OTO-LARYNGOLOGIST, SOUTHMEAD INFIRMARY, BRISTOL.

THE following case of a left facial paralysis produced by a right mastoid abscess is somewhat unusual.

A girl, aged 21, was admitted to the Bristol Royal Infirmary 25/10/19 complaining of pain in the right ear. The history was that both ears had discharged since infancy, but without pain or other symptoms. Seven days before admission there was intense pain in the right ear. The discharge was unchanged. Fomentos were applied and the pain became less on the fourth day. On the sixth day she was fairly well; that night she had two rigors, with left facial paralysis.

On examination the girl was found to be very ill, drowsy, and flushed. T. 100° 2' F., P. 112, R. 32. She ached all over, but especially at the back of the head; there was well-marked head retraction. There was peripheral facial paralysis and external rectus paralysis on the left side; ptosis and some photophobia on the right. Pupils equal and active; fundus could not be seen. The right mastoid showed no tenderness or œdema, but there was slight redness behind the ear. The right sterno-mastoid was tender along the upper part of its anterior border. Air-conduction diminished both sides, bone-conduction appeared normal, but could not be absolutely determined in the mental condition of the patient. No vertigo. Lumbar puncture gave very turbid cerebro-spinal fluid under slightly raised pressure.

The point now was to decide which side was most to blame for the condition. The unimpaired bone-conduction on the left was taken as evidence that the facial was probably not involved at the internal meatus. But suppuration might nevertheless have determined compression in the canals. On the right side, however, there was very little pointing to mastoid involvement. The ptosis and tenderness of the sterno-mastoid were not of much help, and the patient allowed free percussion of the mastoid process. In view of her general condition and the meningitis action was imperative. It was determined to deal with the right side.

Operation.—A radical mastoid operation was immediately performed. The lateral sinus and internal jugular were thrombosed. The latter was tied at the level of the cricoid and all clot curetted out of both. The dura was exposed over the antrum, the cavity curetted clean, and the wound drained. The patient became very faint and the operation had to be completed rapidly. She rallied well; next day she was very much better and mentally clearer. The facial paralysis and ptosis were less marked. On the third day the temperature was just above normal, the facial paralysis and ptosis were practically gone; the left external rectus remained paralysed. Becoming restless at midday, she was delirious in the evening, sat up in bed, and fell back dead.

Post-mortem.—The right lung was extensively infarcted, suggesting a soft pulmonary embolism as the immediate cause of death. In the skull the thrombosis had recurred in the lateral sinus, going 1 inch down the occipital. There was an extradural abscess over the petrous on the right side, which had been drained at the operation. The dura over it was thick, soft, and red. An extensive fibrino-purulent mass reached from the curve of the sigmoid sinus across the mid-line and into the left posterior fossa, completely surrounding the third, fourth, and sixth nerves on both sides and the fifth, seventh, and eighth on the left only. The bone on the left showed no evidence of infection after stripping the dura.

The left facial paralysis and its curious diminution after operation on the right side were thus explained.

I am indebted to Dr. P. Watson-Williams for permission to publish these notes.

INSURANCE PATIENTS IN THE WEST OF ENGLAND.
—The number of insured persons in Bristol is 155,825, and last year 409,495 prescriptions were dispensed. During 1919 the prescriptions dispensed for members of the Devon Insurance panel were 253,256, the cost being £285, compared with 214,957 in 1918, the expenditure in respect of which was £213. The Gloucestershire Insurance Committee report that in 1919 the prescriptions dispensed amounted to 123,000, against 134,100 in 1918.