RETRO-MALLEOLAR TUBERCULOSIS CURED BY TUBERCULIN ADMINISTERED ACCORD- ING TO KOCH'S METHOD.

BY

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WHEN the patient whose case is here described first came under observation he presented a smooth, soft, uniform, resilient swelling, an inch and a half in diameter, situated between the right internal malleolus and the heel.

The hollows at the sides of the tendo Achillis were filled up, and there was some fullness along the outer side of the foot. The skin was not affected, except for one or two papules and a small area the size of a threepenny-piece over the lower part of the swelling, where it was thin, livid, and boggy. There was no pain and no restriction of movement. There was no history of injury; the condition had developed gradually, with slight variations, during the preceding five years, in the last nine months of which an oval nodule about an inch in length made its appearance further up the leg, just above the top of the boot. The patient was a young farmer, 28 years of age, of good physique, and in good health, except for some digestive trouble and a rather considerable amount of incidental wear and tear. The case corresponded to a clinical form of local tuberculosis described by Dr. le Clado at the British Congress of Tuberculosis in 1901, under the title "Tuberculose rétro-malléolaire."¹

The treatment adopted, not by itself ideally complete, consisted in the administration by subcutaneous injection of Koch's T.R., beginning with 0.0002 c.cm. and ending in the course of eleven weeks with a dose of 2 c.cm. The latter was believed at the time to be the full dose recommended by Koch, but, as a matter of fact, it is only one-fifth of his maximum dose, which is 20 mg. *solid substance*. The interval between the injections varied from two to ten days according to the dose, and the proportionate increase of dose was from double with the smallest to one-seventh with the highest. Toleration was very good, with the exception of one dose of 0.7 c.cm. T.R. administered three days after 0.3 c.cm., when too great an advance caused a sharp febrile reaction, which abated within twenty-four hours. The general health of the patient was well maintained throughout the series, and even improved. Reaction at the site of disease though distinct was mild, although after the last three or four doses there was considerable focal oedema, for which the position and movement of the affected parts may have been in part responsible.

Six weeks after completion of this treatment the upper nodule had practically disappeared, the mass between malleolus and heel had shrunk into a well defined rounded, compact lump, and the ankle had a much more normal appearance. It was clear that a specific curative effect had been produced, and it was noted in particular that, in accordance with Koch's description, by the time a dose of from half to one milligram had been reached there was distinct clinical evidence of an immunizing action. Ten weeks after the administration of the final dose the effect of old tuberculin was tested; 0.0015 c.cm. T.K. gave an indefinite result, 0.007 c.cm. four days later was negative, but 0.02 c.cm. administered after a further interval of seven days produced a sharp general reaction (temperature 102.4°), distinct but not excessive focal redness and oedema at the site of disease, and great inflammation at the site of injection.

It was concluded from this test that reactionable material still persisted at the site of disease, either as living bacilli or their pathological effects. As a matter of fact, there were both, for fifteen months later the skin over the mass between malleolus and heel broke down, giving exit to a necrosed malodorous plug about the size of a marble and having the appearance of coagulated white of egg, after which the edges turned in and this site healed soundly and permanently, though slowly.

The patient was now lost sight of for about five years. There was then a large area of chronic inflammation, over six inches in length by three in breadth, immediately above the former site of disease, and several small scrofulous openings represented the line of extension from below upwards. Evidently the infection had passed through the aponeurosis near the original site of the disease in the triangular space in front of the tendo Achillis and had spread upwards in the subcutaneous tissue. After a few preliminary doses of T.R., bacillary emulsion was given and used on the same intensive plan. The intervals were gradually increased from two days to as much as six weeks, and the dose was increased by fractions rather large at first but ultimately not more than a seventh to an eleventh up to a dose of 3.5 c.cm., containing 17.5 mg. solid and total bacillary substance. This process occupied fourteen months. Mild reactions at the site of disease occurred after the earlier injections, and gradual but obvious improvement went on throughout the series, ending in complete permanent replacement of the disease by healthy scar formation nine weeks after the last injection. The scrofulous openings were scraped midway in the series without any decisive influence on the course of cure; on several occasions subsequent to the scraping fresh places within the affected area inflamed, broke down, discharged their contents, and healed up more or less slowly. With the exception of a little rest occasionally the patient carried out active duties throughout the series.

This case is published not as an example of ideal treatment, but as a definite instance of an undoubted specific curative effect of tuberculin, corroborative, so far as it goes, of Koch's teaching on the subject.

REFERENCE.

¹ *Transactions of the British Congress in Tuberculosis*, 1901, vol. iii, p. 648.

OVARIAN HAEMORRHAGE FROM RUPTURED BLOOD CYST.

BY

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THE account of two cases of severe ovarian haemorrhage in young girls (*BRITISH MEDICAL JOURNAL*, June 18th, *Epitome*, para. 667) prompts me to relate a case with similar features and doubtful etiology that recently came under my care.

A young unmarried woman, aged 22, was seen by me in consultation with her doctor about four months ago for acute abdominal pain which had begun during a game of golf the same day. She gave a history of lumbar ache and vague abdominal discomfort coming on after exercise during the last six weeks. Her periods had been regular, of four weeks' cycle, and the next was due.

The present attack consisted of cramp-like pain in the hypogastrium and right iliac fossa, associated with nausea and vomiting. The pulse was 98, and the temperature 100°. The right rectus was slightly rigid. The case resembled appendicitis.

Laparotomy revealed free blood in the peritoneal cavity, and altered blood of a thicker consistency and large clots filled the pelvic region. About a pint of fluid was removed. The right ovary was found to be replaced by a dark fleshy tumour, three inches in diameter, twisted on its pedicle, engorged, and ruptured across its centre. The right Fallopian tube was also deeply congested. The tumour and tube were removed and the peritoneum cleared of blood clot and debris as far as possible. Before final closure of the abdomen, the left adnexal region was examined, and the left ovary was found to be slightly cystic but otherwise normal. Convalescence was uneventful, and the menses appeared regularly and of normal duration.

Three months later I was called to see her again, late at night, for sudden onset of acute abdominal pain and vomiting which began earlier in the evening. The pain was again cramp-like and situated around the umbilicus and hypogastrium. The temperature was 97°, and the pulse 80. The symptoms pointed to either another ovarian catastrophe—on the left side—or commencing obstruction of the small intestine from adhesions. The latter appeared the more probable, and proved correct on opening the abdomen two hours later. A quantity of clear serous fluid welled out of the wound, and examination revealed the lower two feet of ileum deeply injected and twisted round a thin fibrous adhesive band between the intestine and the anterior abdominal wall. This was divided, but the volvulus appeared only partly relieved. A further search resulted in finding a second band higher up connecting the ileum and umbilicus. This proved to be a Meckel's diverticulum, the canal being patent at its junction with the ileum about two feet above the ileo-caecal valve. The remainder of the diverticulum, which was four inches in length, was merely a slender impervious cord. These bands being suitably dealt with, the gut gradually resumed its normal colour. The appendix, being engorged and congested, was removed at the same time.

The pelvis was now examined. The right adnexal region was clear of adhesions and showed a well healed cicatrix from the former operation. On the left side a tense, thin-walled ovarian cyst was found. It was freely movable, attached by a pedicle, and as large as a tennis ball. It was removed without difficulty. The patient made a good recovery. During convalescence she was given a course of thyro-ovarian endocrine compound, and various other therapeutics. So far, two months after the second operation, there have been no symptoms of artificial menopause. On the contrary, she is bright, vivacious, and of healthy appearance, whilst one short menstrual flow has occurred since the operation.

There are several features of interest in this case:

1. The pathological report of the solid tumour on the right side showed a mass of blood clot and granulation tissue. There were no signs of ectopic gestation, which could be discounted entirely in this case. The condition was probably due to a simple unilocular ovarian cyst that had been subjected to many twists and torsions with attendant haemorrhages, resulting in final strangulation and rupture.

2. The left ovary, though slightly cystic when first examined, had become completely degenerated and cystic in the space of three months, and had enlarged to about

three inches in diameter. It would doubtless have shared the same fate as the right ovarian cyst had it not been removed.

3. During this period, menstruation had been normal and regular.

4. The risk of intestinal obstruction was constantly present by reason of the Meckel's diverticulum fixed at either end like a bow-string. This danger became enhanced by the advent of adhesions following the ruptured cyst, the fluid being of a particularly gluey and fibrinous nature.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF FACIAL PARALYSIS DUE TO EXPOSURE.

FACIAL paralysis due to exposure to cold, often in riding in an omnibus, is by no means rare; I have seen four cases during the last two years.

The great majority clear up quickly under the influence of salicylates and protection from cold by wool, but there are a minority which become chronic, one instance being a woman, aged 70, who had been afflicted since childhood. Undoubtedly such cases would decrease in number if pre-

cautions were taken to prevent the facial muscles from becoming stretched, a line of treatment adopted in other paralyses. In neurological and massage clinics suitable apparatus is used with this end in view, but frequently cases only

reach the clinics when the condition has become chronic.

Two acute cases received salicylate treatment. In another patient a simple splint, made in a few minutes, was used in addition. A piece of covered electrical wire (not flex), about 15 inches long, was bent in the middle and covered with linen tape. The doubled end was bent in the form of a retractor, and inserted in the angle of the mouth. The free ends were carried round the ear in the manner of spectacles, and in such a way as to draw the angle of the mouth upwards and backwards. The device is worn as much as possible, day and night.

The patient volunteered the statement that articulation was easier with the apparatus in position and that it felt more comfortable. Recovery started six weeks later and was almost complete.

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TREATMENT OF ACUTE TRAUMATIC SYNOVITIS OF THE KNEE.

ON page 39 of the Army Health Report for 1925 it is stated that where there is no internal derangement cases of synovitis of the knee recover more quickly if treated by aspiration of the joint, repeated if necessary on several occasions. When this operation came into my experience re-aspiration was not found necessary, perhaps because my cases were but few, perhaps because they were seen early, perhaps because they were young; but, I venture to submit, it may have been because of the after-treatment by elastic pressure.

I was then serving in the *Excellent*, where there were many young officers and men going through courses of instruction, and it was urgent that any case of synovitis should be cured with the least delay possible. Consequently any joint that seemed to have more than half an ounce of fluid in it was aspirated, the puncture was sealed with collodion, and over that cotton-wool and an elastic bandage were adjusted, producing gentle and uniform pressure; the patient remained in bed, without a splint, though his leg might be swung, for two or three days. No patient was away from work more than seventeen days,

and none had to be aspirated twice. In the first eight months of 1908, of the 15 cases of injury to the knee 3 went to hospital (2 with loose cartilages), 1 had a contusion of bone, and 11 had effusion—small in 6, who went to duty in fourteen days (average); 5 had more effusion and were aspirated (fluid $3\frac{1}{2}$ oz. downward); they also returned to duty—4 in fourteen, 1 in seventeen days—but of course they were the more severe cases. The first time I heard of this elastic pressure treatment for a superficial effusion Mr. Chiene was telling us of a patient who, on the night before his wedding, boxing with a friend, got a nasty smack in the eye, and came to Mr. Chiene in great perturbation to be saved from an awkward disfigurement on the morrow. Mr. Chiene filled up the patient's orbit very evenly with cotton-wool, put an elastic bandage over, and next day the man was unmarked. Care is required in the adjustment, for haemorrhage occurs wherever in the orbit pressure is relieved by inequality in the packing. The method is most useful, too, in treating sprains, especially if they are seen early, when it prevents subcutaneous laceration of tissues and shortens the time of absorption; it is also useful after operation to limit oozing.

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RETROVERTED GRAVID UTERUS WITH INTESTINAL OBSTRUCTION AND RUPTURE OF BLADDER.

THE following case appears to be worthy of mention on account of its rarity, the complication of anuria and enteritis, and the remarkably rapid improvement of the patient after the intravenous injection of hypertonic saline solution, and of ammonium chloride by the rectum as a preliminary to operation.

On December 15th, 1925, I was called to see a woman, aged 32, who was complaining of a sudden acute attack of abdominal pain, colicky in character and accompanied by vomiting. There was no previous history of gastric, biliary, renal, or appendicular trouble, and menstruation had been regular until four months previously; since then she had had no periods and thought that she was about four and a half months pregnant. The bowels acted regularly.

The abdomen was slightly distended and a tumour, dull on percussion, was felt above the pubes, passing down into the pelvis. There was no sign of free fluid. Per vaginam, the cervix was felt to be pushed forward towards the symphysis, and a fairly firm mass filled the pouch of Douglas.

The patient was admitted to hospital, and on vaginal examination under an anaesthetic the uterus appeared to be retroverted and fixed in the pelvis. An unsuccessful attempt was made to replace it. On recovery from the anaesthetic abdominal pain with vomiting continued, and distension increased. A few hours later the patient aborted a four and a half months' foetus, but abdominal distension continued and signs of free fluid were found, particularly in the left flank. As distension of the abdomen persisted and the bowels did not move with treatment, exploratory laparotomy was undertaken. The patient's condition at this time was grave, so 3 drachms of ammonium chloride in 5 oz. of water were injected into the rectum, and 10 oz. of a 15 per cent. solution of sodium chloride intravenously.

Operation.

The operation was performed under scopolamine and morphine and local anaesthesia with a little open ether; the peritoneal cavity was found to be full of clear fluid, which was mopped up and siphoned off. The small intestine was distended and obstructed by pressure at a point where the postero-inferior wall of the elevated bladder made an angle with the anterior wall of the retroverted and enlarged uterus. Here were some flakes of recent lymph, and here also was a small rent in the postero-inferior wall of the bladder, through which urine was passing into the peritoneal cavity. The intestine was easily freed undamaged and the bladder wall sutured. The abdomen was closed except for a rubber drain to the bladder area, and the uterus was brought up from its retroverted position. A catheter was left in the urethra.

For two days after operation the patient had complete anuria, and complained of intense thirst, after which urine was passed normally, but very intense and persistent diarrhoea developed and continued for four or five days, during which time she became very ill, but slowly improved and left hospital on January 22nd, 1926, the bladder and bowels acting normally. She has since been delivered at full term of a normal infant, after the newly pregnant uterus had again become retroverted.

Mr. Rutherford Morison, in *Abdominal and Pelvic Surgery*, mentions rupture of bladder with retroverted pregnant uterus as an emergency, and refers to the occurrence of enteritis following the accident as an extremely rare and dangerous complication. The development of