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