

trypanosomiasis it was decided to continue the injections of tartar emetic over a prolonged period, and such was done until two years had elapsed from the last appearance of the causative parasite. All treatment was stopped in April, 1918, and since that time the patient has been working on a farm in England. He is able to do a good day's work, and has regained his normal weight of 11 st. and feels quite fit.

Remarks.

The case is chiefly remarkable from being the first on record in which one may feel fairly confident that a definite cure has resulted in a true case of Rhodesian trypanosomiasis, and for the really enormous amount of tartar emetic it was found possible to administer. In all the patient had considerably over 500 grains of the drug, and no untoward effects of such administration have manifested themselves.

A CASE OF

CHLOROMA SIMULATING MASTOID DISEASE.

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CHLOROMA has been known and described for something over 50 years, and has been variously regarded as a carcinoma (the so-called "green cancer"), a sarcoma and a variety of lymphatic leukæmia. In looking up the literature I have found records of some 65 cases of this malady, but as the following appears to have some points of interest I venture to add it to the number.

The Case Described.

J. M., male, aged 10, was admitted to hospital on June 14th, 1919, complaining of pain and discharge from the right ear. His temperature was 99.6° F. and pulse 104, and on examination he was found to have a tender swelling behind the right ear over the mastoid process, enlargement of the upper cervical glands on that side, and right facial paralysis of the complete type. A diagnosis of tuberculous mastoiditis was made, and the mastoid antrum was opened, revealing the presence of a small amount of pus and a quantity of greenish-looking granulation tissue. The patient's condition improved steadily for about a week, and he then began to suffer from retention of urine and marked constipation; there was no vomiting or headache, and the optic discs were normal. From this time onwards the temperature fluctuated, rising to 100° or 101° every evening, with corresponding increase of pulse-rate, which varied from 90 to 116. Examination of the cerebro-spinal fluid showed it to be normal as to pressure, content, and sterility; the Wassermann reaction was negative in cerebro-spinal fluid and blood.

The first blood count, done on June 23rd, revealed an apparent condition of lymphatic leukæmia; the figures were: R.B.C. 2,091,000, W.B.C. 19,800, Hb 40 per cent., polymorphonuclears 7.5 per cent., lymphocytes 91 per cent., eosinophiles 1 per cent., basophiles 0.5 per cent. On June 30th the patient had severe epistaxis and complained of pain across the back at about the level of the eighth dorsal spine, and on July 16th he developed a left-sided facial paralysis. By this time the facial paralysis on the right side had greatly improved, and it had recovered completely before his death on August 4th. There was at no time any affection of the other cranial nerves. On July 21st a very slight bilateral enlargement of the inguinal glands was noted, and also a movable nodule the size of a pea about 1 inch to the left of the sternum in the third intercostal space. The liver was slightly enlarged. The blood count showed a steady increase in the number of leucocytes, and the last one taken before his death gave the following numbers: R.B.C. 945,000, W.B.C. 37,200, Hb 23 per cent., polymorphonuclears 2 per cent., lymphocytes 90 per cent., large mononuclears 6 per cent., myelocytes 2 per cent. The lymphocytes were all of the large variety and a very few normoblasts were seen; there was slight polychromasia and variation in shape and size of the red cells. The urine was normal throughout. The patient became gradually weaker and the pulse and temperature higher, fluctuating respectively between 130 and 150 and 100° and 104°. Death occurred on August 4th, seven weeks after the apparent onset of the disease.

Post-mortem Appearances.

Unfortunately, permission for a complete autopsy could not be obtained, so that practically no examination of the head was possible. The mastoid wound was reopened and somewhat enlarged, and it was found that the bone was rather soft and looked greenish-yellow on the cut surface; the antrum was filled with a soft greenish substance which was removed for examination. Spinal column and cord: There were numerous flattened greenish-yellow masses on

either side and in front of the bodies of the vertebræ in the thorax and abdomen, and the largest, which measured 6 in. by 3 in., was invading the right psoas muscle. These masses were all closely incorporated with the periosteum, but did not invade the bone; the periosteum could be stripped cleanly off the bone, bringing the tumour with it. A similar substance was found in the posterior part of the vertebral canal in the mid-dorsal region and was pressing on the spinal cord. Skeletal system: A nodule of greenish-yellow tissue the size of a florin was situated immediately to the left of the sternum between the second and third costal cartilages towards the anterior surface. On the posterior surface this mass extended from the first to the fourth costal cartilage. Numerous greenish masses were incorporated with the periosteum on the inner surface of the ribs. In the upper end of the right femur the periosteum and bone appeared normal; the marrow was slightly greenish-yellow in colour. Lungs: There were small masses of lymphoid tissue on the surface of both lungs and numerous petechial hæmorrhages on the external and cut surfaces. Large lymphatic glands were found at the roots of both lungs; these showed no greenish-yellow colouration. Pericardium: Many petechial hæmorrhages. One or two greenish nodules the size of a pea on the cardiac surface. Heart: Many petechial hæmorrhages. Blood-vessels normal. Thymus normal. Stomach: Mucosa showed several irregular raised greenish-yellow patches, firm and hard to the touch; some small submucous hæmorrhages. Duodenum: A few large greenish-yellow masses on the mucous surface, chiefly in the first part. The remainder of the small intestine was normal. Large intestine: Numerous similar nodules the size of a pin's head. Liver: Surface slightly nutmeg with some fatty change. Spleen: Surface mottled; pulp a dirty yellowish-brown. Pancreas: Invaded by a few small greenish-yellow nodules. Kidneys: Left—The whole surface was studded with greenish-yellow masses from a pin's head to a farthing in size; these masses were firm and hard to the touch and scattered throughout the whole kidney. The intervening tissue was mottled dark red with hæmorrhages. The capsule stripped easily. Right—Condition similar but less marked. Suprarenal capsules appeared normal. Lymphatic glands somewhat enlarged in neck, axillæ, and groins; the latter only could be examined and showed no greenish colouration. The mesenteric glands were enlarged, discrete, and purplish-red. Mouth and tongue appeared normal on external examination. Larynx, trachea, and thyroid gland could not be examined.

Microscopic appearances.—The bone marrow from the femur showed great hyperplasia of all the normal marrow cells, no particular type of cell predominating. In the kidney a section through one of the nodules showed many cells resembling plasma cells together with small round cells and a few with multiple nuclei. The (?) plasma cells contained an eccentric nucleus approximately the size of a lymphocyte, and their protoplasm stained a faint mauve in an eosin-hæmalum preparation. There were numerous thin-walled vessels and the whole appearance was strikingly reminiscent of granulation tissue. In other regions of the kidney the tubules were separated by collections of similar cells. In the pancreas there was a similar infiltration, with pushing apart of the acini. The spleen and lymph glands appeared normal. In the stomach the mucous membrane showed evidence of post-mortem necrosis, and contained a few small collections of cells as above. In the liver the cells forming the greater part of the centre of each lobule were necrosed, and the intralobular veins were widely dilated. There were no lymphoid masses, such as occur in lymphatic leukæmia, and no infiltration resembling that in the other organs. The tissue from the mastoid antrum was composed of the same type of cells as above, as were also the nodules growing from the periosteum of the several bones; in the parts where muscle had been invaded the fibres were degenerate.

Remarks.

In nearly all the cases reported examination of the tumours and of the bone-marrow has shown them to be composed almost entirely of lymphocytes, mainly of the large variety. McCallum, in his "Text-book of Pathology," describes a type which he calls "myeloid chloroma," in which cells resembling plasma cells predominate and masses of myelocytes appear in the bone-marrow. In the present case it will be noted that there was a hyperplasia of *all* the elements of the bone-marrow, together with a variety of type in the cells composing the tumours. Further, in none of the reported cases have I been able to find an onset resembling mastoiditis, although, considering the frequency with which head symptoms are the first indication of the disease, this would not seem to be an unlikely occurrence.

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