REMOVAL OF ADULT FILARIÆ IN CASES OF LYMPHANGITIS.

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IN the BRITISH MEDICAL JOURNAL of April 21st, 1894, I published the notes of a case in which a number of filarial worms were removed from a patient who had suffered from lymphangitis of the arm. The case served to demonstrate the possibility of localising the position of the parasites, in some cases of filariasis, and of removing them; since that period I have removed parasites from five other persons suffering from various manifestations of the disease. The following are brief notes of these cases:

CASE I.—A Eurasian lad was suffering from lymphangiectasis of the femoral lymphatics on both sides of the body; his blood contained large numbers of embryo filariæ. The mass of diseased lymphatics in the right groin was removed successfully, but the swelling on the other side continued to enlarge, and embryos were after some time again found in the blood. The patient was averse to undergo a second operation. The mass removed from the right thigh was examined and found to contain three worms, one male and two females.

CASE II.—Another Eurasian lad, whilst under treatment for chronic dysentery, developed inflammation of the lymphatic gland above the right elbow; filariæ were found in his blood. An operation was performed, and the inflamed gland, as well as the swollen lymphatic vessels above and below it, were removed. These structures were subsequently examined, and several filariæ, including two male worms, discovered. After some days embryos were again found in the blood.

CASE III.—A native lad was admitted into hospital suffering from acute synovitis of the knee. The knee rapidly became well, but about fourteen days after admission the lymphatics of the right upper arm became inflamed, and the blood was found to contain filariæ. When the inflammation had subsided a cord-like swelling could be felt along the inner side of the limb. An incision was made down to this swelling, and on exposing the fascia overlying it a pinhead opening could be seen through which a bead of pus exuded, and on pressure a lump of matter containing a dead filarial worm was extruded. Four other small abscesses, or cysts, were found, each about an eighth of an inch in diameter, and with smooth walls. All of the cavities contained pus and filarial worms. The latter were coiled together, and disentangled from one another with considerable difficulty. They included two intact females and portions of others, as well as one male broken into two pieces. The worms were dead and somewhat shrivelled. When the patient left hospital embryos were still to be seen in his blood.

CASE IV.—A Hindu, aged 30, was admitted into hospital for lymphangitis of the upper arm. Filarial embryos were found in his blood. The local conditions were very similar to those of the last case. A small abscess containing one dead worm was found in the thickened tissues. When the patient was discharged the blood still contained embryos.

Fig. 1.—The caudal extremity of the male worm when first seen; the diameter of the body is from $\frac{1}{16}$ to $\frac{1}{8}$ of an inch.

the blood still contained embryos.

CASE V.—A Hindu, aged 35, was admitted into hospital on account of incipient elephantiasis of the scrotum. Soon after admission he was attacked with rigors and very high fever, accompanied by inflammation of the lymphatics on the inner side of both arms. Abscesses formed in the left arm, and were opened, giving exit to 2 or 3 ounces of pus containing filariæ—one male and portions of two females. The swollen lymphatics in the right arm were excised, and being subsequently examined were found to contain a series of small abscess cavities, communicating with one another and containing altogether somewhat less than half a drachm of pus. In the pus were found portions of one male and two female worms.

Several cases of lymphangiectasis besides the one recorded above have been operated upon in the expectation of finding

filariæ, but with a negative result so far as the discovery of parasites was concerned. The worms are, however, not easy to find, and it is quite possible that they may, in some instances, have escaped observation. In one of the cases of lymphangitis embryos were found in the blood immediately subsequent to operation, showing that all the parental worms had not been removed. In the case of lymphangiectasis, although the operation was followed by the disappearance of embryos from the blood, yet they subsequently reappeared and further manifestations of disease took place. As only one of the tumours was removed, this result was to be expected. In two of the cases in which dead worms were found in the suppurating tissues embryos subsequently reappeared in the blood.

Several cases of another class were also operated upon, namely, those in whom all the usual signs and symptoms of filariasis were present, yet in whose blood no embryo filariæ could be found. In such cases the identity of the symptoms with those of others in whom embryos are found justify the assumption that they are cases of filariasis. There can be little doubt that the number of embryos found in the blood is proportionate to the number of parental worms that are present in any particular case, and it is possible that when the latter are few in number the embryos may be so few as to escape observation.

The experience of the last three years has confirmed me in the opinion that operative measures are called for in many cases of lymphangiectasis of filarial origin. Apart from the possibility of removing the parasites themselves, the operation usually relieves the patients from the annoyance caused by the recurring attacks of inflammation which so frequently incapacitate them from carrying on their duties. A patient upon whom I operated in February last had had seven of these attacks in the course of the six weeks previous to operation, and had in consequence to give up work.

During three and a half months that have elapsed since he left hospital there has been no further trouble, and he has been able to resume his occupation. Cases in which there have been attacks of chyluria, or in which there is other evidence to show that the obstruction to the circulation of lymph is seated high up, are not suitable for operation. But there are a large number of cases in which the dilatation of the lymphatics is very limited in extent, and which, therefore, may be operated upon with safety and success.

Some Continental surgeons have deprecated such operations as likely to be dangerous, but the results obtained in the Madras General Hospital up to the present time do not tend to corroborate those views. During the past seven years twenty-four operations of this nature have been performed, and in none of these cases did any serious symptoms arise.

The worms obtained from one of these cases were examined by Mr. A. G. Bourne, of the Madras Presidency College. The parasites were still living when submitted to examination, and it was found that the caudal extremity of the male worm was quite straight (see Fig. 1), and not curved upon itself, as it has hitherto been represented to be. Soon after death took place the tail became curved upon itself in a manner resembling that in which it has hitherto always been seen. Mr. Bourne is of opinion that the bodies formerly described by himself as being spicules, are in reality tubes. One of these tubes, when first seen, was extended through the orifice near the caudal extremity, but on tapping the slide it became gradually withdrawn to a considerable distance within the body of the animal. Tubes containing enormous numbers of spermatozoa were also seen, but no continuity of structure between the before-mentioned tubes and these sperm receptacles could be made out.

BEQUEST.—By the will of Mr. Robert Ingham, of Leeds, the testator gives £200 to the Leeds General Infirmary, £100 to the Cookridge Convalescent Home, and £50 to the Hospital for Women and Children, Leeds.

PRESENTATION.—Dr. Hawkes, of Polyphant, was presented on September 10th with a testimonial in the shape of an illuminated address, a gold chronometer watch, and a purse of gold, on the occasion of his being compelled through ill-health to leave the neighbourhood, where he had practised for 20 years.