Filaria can be present for several years before symptoms develop, or they may be of a non-pathogenic type. In these cases the microfilaria may be found incidentally as in the present cases. The complement fixation test is positive in up to 50 per cent of the cases of filariasis but is negative in pure *Acanthocheiloneuma perstans* infection. This test is of value in confirming a diagnosis of tropical eosinophilia due to filariasis, the commonest cause of this condition. The skin sensitivity test is positive in 50 to 60% of all cases of filariasis. (Ahmed, 1960).

Microfilaria can persist in blood for up to 63 hours at 27-28°C. (Tu and Hpay, 1962) and in stored blood at 4-6°C. for as long as 24 days (Bird and Menon, 1961). There is therefore a reasonable chance of incidental discovery, particularly if the infestation is heavy. In all cases the type should be indentified by taking fresh specimens of peripheral blood during the day and night. Treatment in the case of the pathogenic varieties may prevent the development of symptoms. The treatment of the non-pathogenic varieties is a more difficult question. In the vector areas treatment is worthwhile to prevent the spread to others, but in this country it seems a little difficult to justify treatment unless there is a potentially pathogenic infection or the patient is returning to the vector area.

In the two cases described, in the absence of symptoms, it was decided to delay treatment until after delivery.

Treatment may be associated with gastro-intestinal symptoms and allergic reactions. Anti-

histamines and steroids have been used both to prevent and control these reactions. One course of therapy is not always curative as demonstrated in our cases and it is therefore important to examine for the presence of microfilaria after treatment.

Summary

Two patients are described in whom microfilaria were discovered during routine blood examinations.

The diagnosis and treatment of filariasis is discussed with particular reference to these two cases.

We would like to thank Dr. J. D. James of the North London Blood Transfusion Centre, who drew our attention to the first patient, and also Mr. K. Iles of the Photographic Department, Charing Cross Hospital Medical School, for the photographs.

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TOXOPLASMOSIS PRESENTING AS A SWELLING IN THE AXILLARY TAIL OF THE BREAST

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OVER recent years cases of acquired toxoplasmosis have been recognised with increasing frequency. Serological studies suggest that between 25 and 50% of the population are infected with *Toxoplasma gondii* at some time in their lives, but the infection is usually latent. Overt cases usually present as a lymphadenopathy with or without pyrexia, and this paper reports two cases of lymphadenopathy without pyrexia due to toxoplasma in which the lymph gland enlargement was so close to the axillary tail of the breast as to appear as a breast swelling.

Case No. 1. An unmarried woman, aged 20, first attended at a Surgical Out-Patient Clinic in July, 1962 complaining of two swellings in the lateral aspect of the right breast, present for two

weeks. She was otherwise symptom-free. Examination revealed two small, hard, non-tender swellings just lateral to the right breast. Her post-auricular lymph nodes were slightly enlarged and small nodes were palpable in the left carotid region and in the left axilla. The swellings near the breast were removed for histology.

Investigations. Chest X-ray normal. Hb. 100%, WBC 4,800, 53% polys., 41% lymphs., 6% monos. No atypical monocytes seen. E.S.R. (Westergren) 5 mm./hr.

Histology. (Dr. W. Goldie) showed the biopsy specimens to be lymph nodes. The lymphoid follicles were hyperplastic with large Fleming centres and there was marked hyperplasia of the reticulum cells of the sinuses. The histological appearances were suggestive of toxoplasmosis.

Serology. Toxoplasma Dye test. 27.8.62, Positive 1:1024. 25.9.62, Positive 1:8192.
25.9.62, Positive 1:8192.

Complement Fixation Test. 27.8.62, Positive 1:32. 25.9.62, Positive, 1:64.

Progress. The patient remained symptom-free; the lymph nodes gradually decreased in size but were still palpable nine months later.

Case No. 2. A housewife of 58 years attended a Surgical Out-patient Clinic in March, 1962, complaining of a hard nodule about the size of a pea low down in the right axilla. This had been present for a few weeks.

On examination, the swelling was found to lie low down on the medical wall of the right axilla, and was thought to be a lymph gland separate from breast tissue. Several other enlarged lymph glands were palpable high in the right axilla and also in the left axilla and the inguinal regions. There were no other abnormalities on examination, and the patient felt in good health. The swelling near the breast was removed for histology.

Histology. (Dr. G. M. Bonser). The biopsy specimen showed a lymph node 1 cm. in diameter which contained dense white infiltration. Histology showed a hyperplastic node, excessive tissue being due to proliferation of the reticuloendothelial cells in the sinuses. Between the reticulum cells were many crescentic bodies suggestive of toxoplasma.

Serology. Toxoplasma dye test positive at a dilution of 1 in 8192. Toxoplasma complement fixation test positive at a dilution of 1 in 4.

Progress. The patient was treated with oral sulphonamides for three months. She remained in good health, and her lymph glands gradually diminished in size.

Discussion

In toxoplasmosis the lymph glands most commonly involved are those of the neck, axillae and inguinal regions, and less frequently the occipital, auricular, tonsillar, hilar and chest wall glands (Beverley and Beattie, 1958). In only two of the 30 cases of glandular toxoplasmosis described by Beverley and Beattie was there any notable enlargement of lymph glands on the chest wall, but in the light of the two cases described toxoplasmosis will have to be considered in the differential diagnosis of swellings near the axillary tail of the breast.

Both the histological features of biopsy specimens and the serological tests are important in the diagnosis of toxoplasmosis, and it was not until the histological reports were received in these two cases that a diagnosis of toxoplasmosis could be made. The histology has been well described by both Saxen and Saxen (1959) and Stansfeld (1961), who point out that the histological features can sometimes be confused with other disorders, particularly sarcoidosis, very early tuberculosis and the more benign forms of Hodgkin's Disease, all of which may present clinically in a manner similar to toxoplasmosis.

The serological tests must be interpreted with some care in view of the fact that positive tests at low titres are common, presumably due to latent infection earlier in life. A titre of 1 in 256 may be expected in only about 1% of adults, and the rising titre demonstrated in Case 1 and the very high titre in Case 2 are extremely suggestive of toxoplasmosis.

It is doubtful if sulphonamide therapy influenced the course of Case 2, and it was decided not to treat Case 1 as there seems no indication to treat cases that are not giving rise to symptoms of ill-health.

Summary

Two cases of acquired toxoplasmosis are described which were of especial interest since the initial presentation was as a swelling in the axillary tail of the breast.

I am indebted to Dr. J. R. H. Towers for much helpful criticism and permission to publish Case 1. I am also indebted to Mr. H. S. Shucksmith for permission to publish Case 2. The serological studies were carried out by Dr. G. B. Ludlam and I am grateful to him for them and advice on their interpretation.

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