Obstructive lymphatic filariasis

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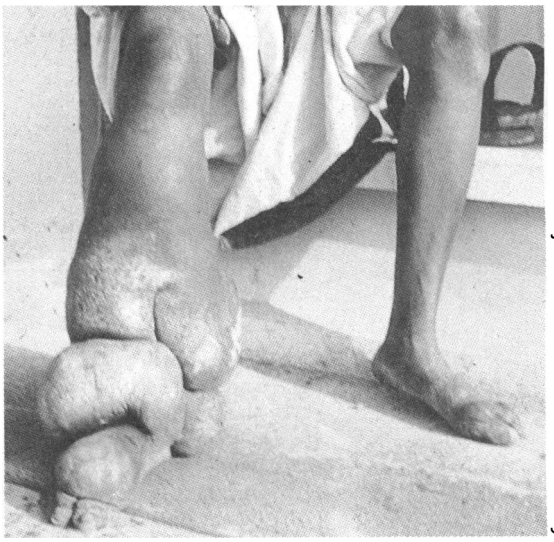
I was told in my training at the London School of Tropical Medicine and Hygiene that Patrick Manson, one of the school's founders, was unsuccessfully sued by a Chinaman for loss of living when he worked in Amoy, China. The plaintiff used to spread a cloth over his elephantoid scrotum and sell sweetmeats from it to the passersby. Manson took it off, leaving the Chinaman with a sadly depleted sales pitch.

During his years in China Manson did many such operations, removing tons of oedematous tissue. It is convenient to have a winch with a big hook hanging above the operating table for these operations. In this way you can hook the oedematous scrotum and winch it up with the anaesthetised patient prone. Then the vital organs—testicles, spermatic cords, urethra, and penis—can be identified more easily among the mass of lymphoedematous tissue.



Severe cases of elephantiasis are now rarely seen in Brazil

Bancroftian filariasis

Bancroftian filariasis, the commonest cause of these spectacular scroti, came to Brazil with the African slaves. The filarial worm, *Wuchereria bancrofti*, is of the nocturnal periodic type. Today we know such periodicity is governed by two biological clocks, one in a physiological tide of the host and the other entrained in the primitive nervous system of the microfilaria. The adults are viviparous, producing active microfilariae that rest in the lungs during the day only to appear in the peripheral blood at night when the culex mosquito host is active. In 1868 Otto Wucherer found these microfilaria in the haematochylous urine of a Bahian patient in Salvador, Brazil, while searching for *Schistosoma haematobium* eggs. His name marks the genus.

Curiously Bancroftian filariasis in Brazil has remained restricted to certain suburbs of coastal cities linked to the old slave traffic such as Belém, Recife, Salvador, Rio de Janeiro, and Florianópolis. Recently 17 patients with Bancroftian filariasis were reported in Recife. Of these, 13 women had affected breast lymphatic vessels. Lymphangitis in filariasis is classically retrograde, spreading down from the irritating worm. The few men in this series of patients all had epididymal disease, and early inguinal and pelvic gland obstruction is characterised by the lymph scrotum (which has a velvety feel), craggy epididymitis, and hydrocele. Sometimes microfilariae can be recovered in the hydrocele fluid. The dramatic advanced lymphoedemas (figure) are now rarely seen in Brazil, but documentation exists in old watercolours.

Of course there are numerous causes of lymphatic obstruction, but almost all of the patients attending my lymphoedema clinic at the Hospital for Tropical Diseases in London in the 'sixties had Bancroftian filariasis. Often no circulating microfilariae were present since the adults were sterile or dead, so we relied more on serology for diagnosis. All patients who had not received diethylcarbamazine were given an adequate course. The basis of management is to avoid further damage to the prejudiced lymphatic system with the control of foot dermatomycoses and prompt treatment of streptococcal cellulitis. It helps if an elastic stocking can be worn and the limb rested with support. Operation is a last resort and was not very successful in my time.

Chyluria

I also had most of my experience with chyluria in London. The senior surgeon at the Dreadnought Seamen's Hospital had a series of incomparable radiographs of bladder and renal chyluria. A simple cystoscopy often clarified the condition. If renal chyluria was present one ureteric opening would be puffing white urine into the bladder. A disrupted lymphatic system communicating with the bladder could be localised and the connection fulgarated. Retrograde pyelography often showed the connection between the renal pelvis and the dilated abdominal lymph vessels. Usually, however, we did nothing. In the past such kidneys had been wrapped in cellophane, inevitably producing renal hypertension.

My knowledge of chyluria progressed while working for the senior physician of the Hospital for Tropical Diseases. We had a curious patient, an English nursing officer working in Nigeria, who had chylous urine but no evidence of filarial infection. After examining her the chief pondered her problem outside the door of the ward. "Feed her a Sudan three sandwich," he instructed me. In chyluria Sudan three is avidly taken up by all body fat and turns the urine pink. It looks like smoked salmon and tastes like nothing on earth, but I gave it her the day before his next ward round. Her most recent urine was saved for him to inspect. It was pristine white. He turned to the sister immediately: "Close the ward, put the patient in the dayroom, gather all the staff to examine the patient's locker, bed, bathroom, everything." He sat in the office having a cup of tea. Behind the lavatory in the men's bathroom a nurse found a bottle of milk. The patient had added this to her urine, hoping that her apparent illness would stop her having to return to Africa. She was the first patient I saw with pseudochyluria.

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