CLINICAL IMAGES

Cutaneous bacillary angiomatosis: A marker of systemic disease in HIV

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A 33-year-old man presented with a 5-week history of relapsing fever, weight loss and right upper quadrant pain. He was pyrexial, the liver and spleen were enlarged and tender, and he had a few pyogenic granuloma-like tumours on the skin (Fig. 1). He was HIV positive (CD4 cell count 119/µl), and had raised liver enzyme levels (alkaline phosphatase (ALP) 258 IU/l and gamma-glutamyl transpeptidase (GGT) 218 IU/l). Results of hepatitis studies and the alpha-fetoprotein level were normal, blood cultures were negative and a chest radiograph was normal. An abdominal ultrasound scan showed an enlarged and markedly echogenic liver and spleen with multiple hypo-echoic foci in keeping with possible micro-abscesses. The skin and liver showed similar histological features: clusters of purple, granular material that stained positive for organisms, confirmed on the Warthin-Starry stain (Figs 2a, 2b and 2c).

The polymerase chain reaction (PCR) confirmed the presence of *Bartonella* spp. on both biopsy specimens. The skin lesions had almost completely disappeared after 1 month on erythromycin 500 mg 4 times a day, but the patient was subsequently lost to follow-up.

Discussion

Bacillary angiomatosis (BA) is caused by the Gram-negative bacteria *B. henselae* and *B. quintana*. Cutaneous BA was first described in 1983, and the first case in South Africa (where disease prevalence in the host, the domestic cat, is 24%[1]) was reported in 1993.[2] BA is difficult to diagnose, requiring culture for at least 21 days; serological studies are often unreliable, and special staining with the Warthin-Starry stain is used to confirm the tissue diagnosis. The prevalence of *Bartonella*

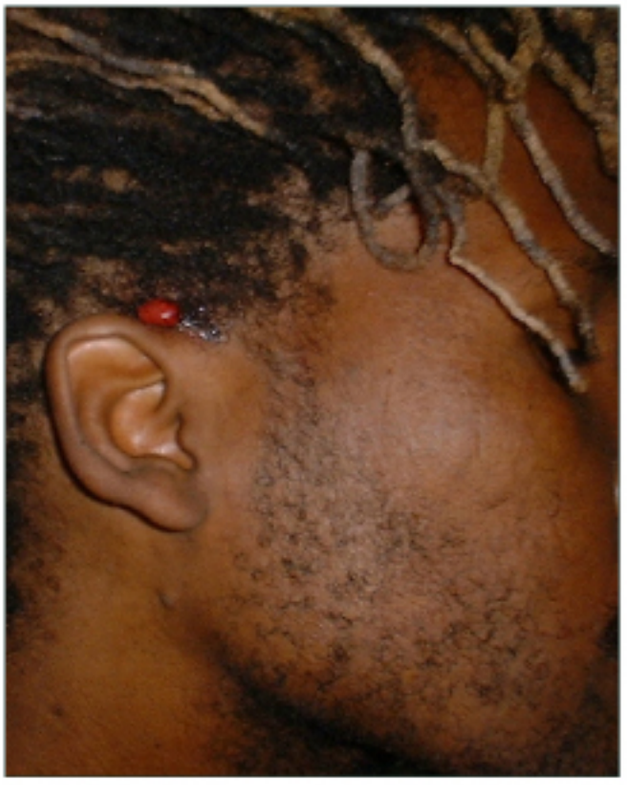

Fig. 1. Pyogenic granuloma-like lesion above right ear

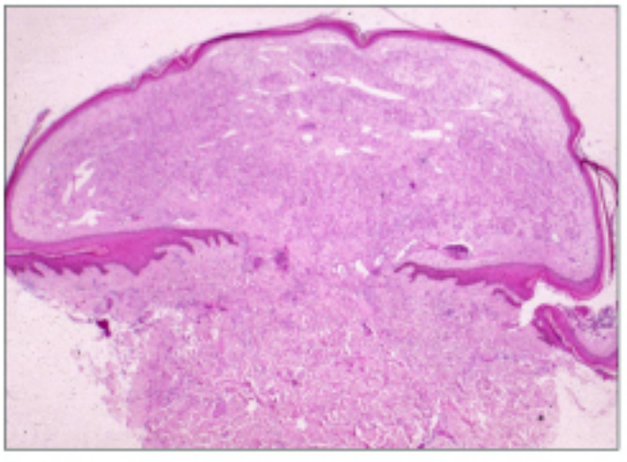

Fig. 2a. Low-power H&E stain of the lesion.

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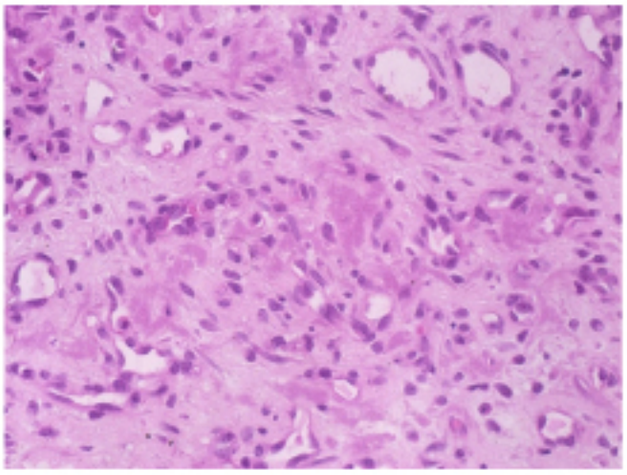

Fig. 2b. Higher-power H&E stain showing purple, granular material.

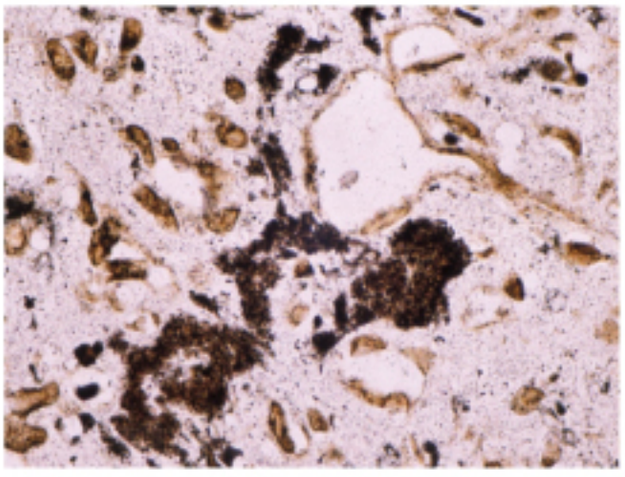

Fig. 2c. Positive Warthin-Starry stain demonstrating the organisms.

bacteraemia (nested PCR) was 10% at the Johannesburg HIV outpatient clinics.[3] The treatment of choice is erythromycin 500 mg 4 times a day for 3 months; also useful are doxycycline, ceftriaxone and the fluoroquinolones.

Examination of the skin is mandatory because cutaneous lesions may be a marker of systemic BA infection, especially in HIV-positive patients, and skin biopsy is much safer than liver biopsy for tissue diagnosis.

1. Kelly PJ, Matthewman LA, Hayter D, *et al. Bartonella (Rochalimaea) henselae* in southern Africa – evidence for infections in domestic cats and implications for veterinarians. *J S Afr Vet Assoc* 1996; 67: 182-187.
2. Levy GR, Nayler S. Bacillary angiomatosis. The first case reported in South Africa. *S Afr Med J* 1993; 83: 855-856.
3. Frean J, Arndt S, Spence D. High rate of *Bartonella henselae* infection in HIV-positive outpatients in Johannesburg, South Africa. *Trans R Soc Trop Med Hyg* 2002; 96: 549-550.