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Kimura's disease

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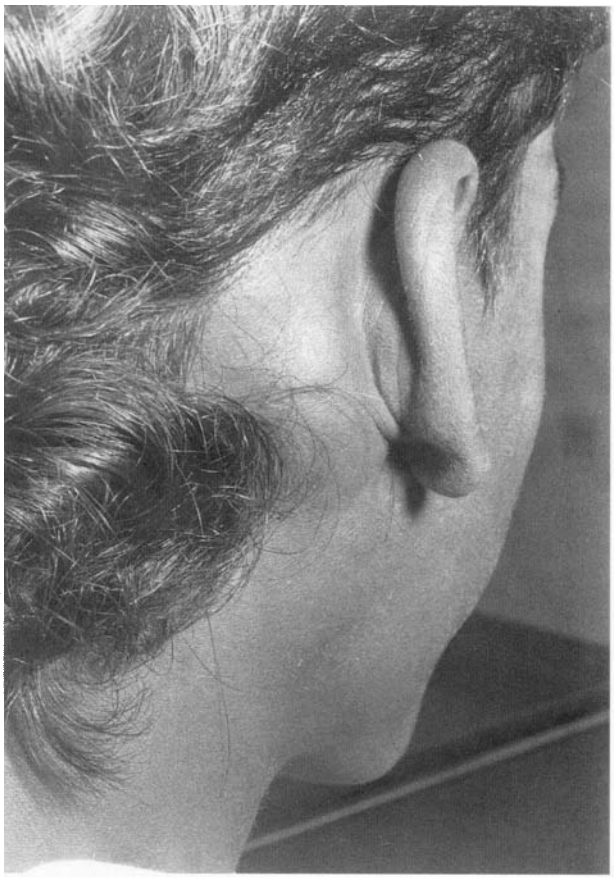
Abstract
Kimura's disease is a rare condition of unknown aetiology. It usually presents as a mass in the head and neck region. The diagnosis is confirmed by biopsy and usually treated by excision even though recurrence is common. This condition can be mistaken for a malignant tumour. In this case report Kimura's disease presented as a non-specific lymphadenitis in an Arab patient.

Key words: Angiolymphoid hyperplasia with eosinophilia (Kimura's disease)

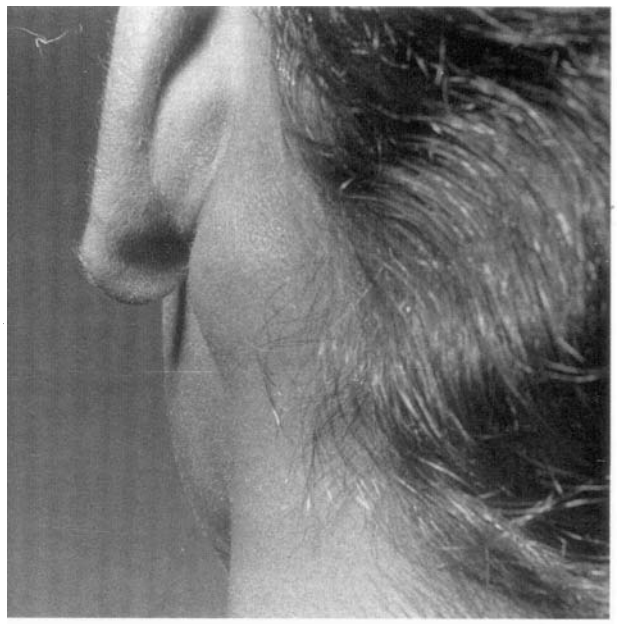
Introduction

Kimura's disease is an angiolymphoid proliferative disorder of soft tissue with peripheral blood eosinophilia and elevated serum IgE. It usually presents as subcutaneous swelling with a predilection for periauricular and submandibular regions. According to Kung *et al.* (1984) it was first described in Chinese literature in 1937 under the designation 'eosinophilic hyperplastic lymphogranuloma'. This entity became more widely known as Kimura's disease after Kimura *et al.* (1948) reported the disease in the Japanese literature. Several cases have been reported in Chinese and Japanese publications as 'eosinophilic granuloma of soft tissue', 'eosinophilic lymphofolliculosis' and, 'eosinophilic lymphofollicular granuloma' etc. This condition apparently is more prevalent in orientals than in caucasians.

Wells and Whimster (1969) reported nine cases of an unusual subcutaneous angiomatoid lesion in the head and neck region under the name 'Angiolymphoid hyperplasia with eosinophilia' (ALHE). They suggested that the disease has an early vascular and a late lymphoid stage and the latter might correspond to Kimura's disease.



(a)



(b)

FIG. 1
1a Right postaural mass. 1b Left postaural mass

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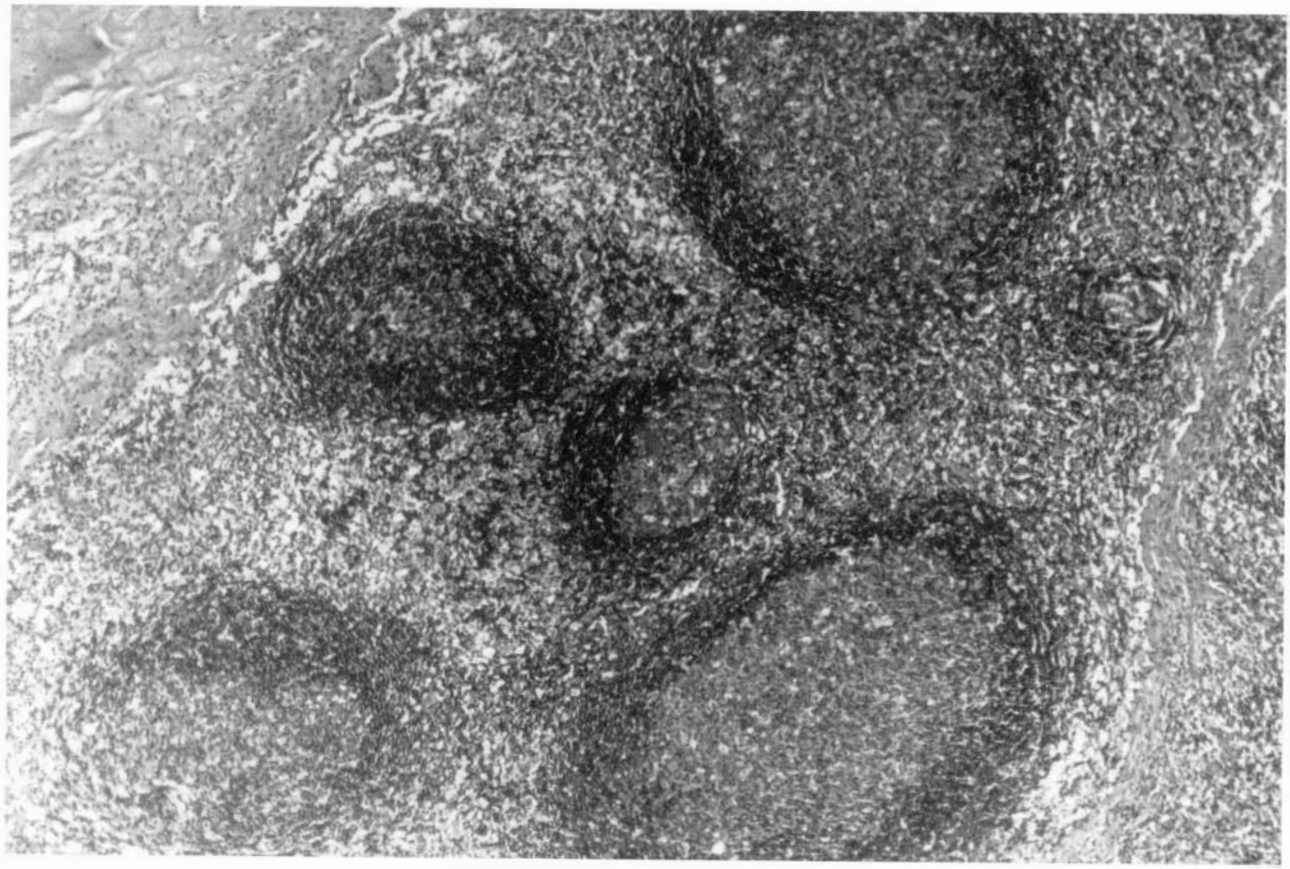

FIG. 2a

Note marked lymphoid hyperplasia with germinal centres in Kimura's disease (H & E; ×40).

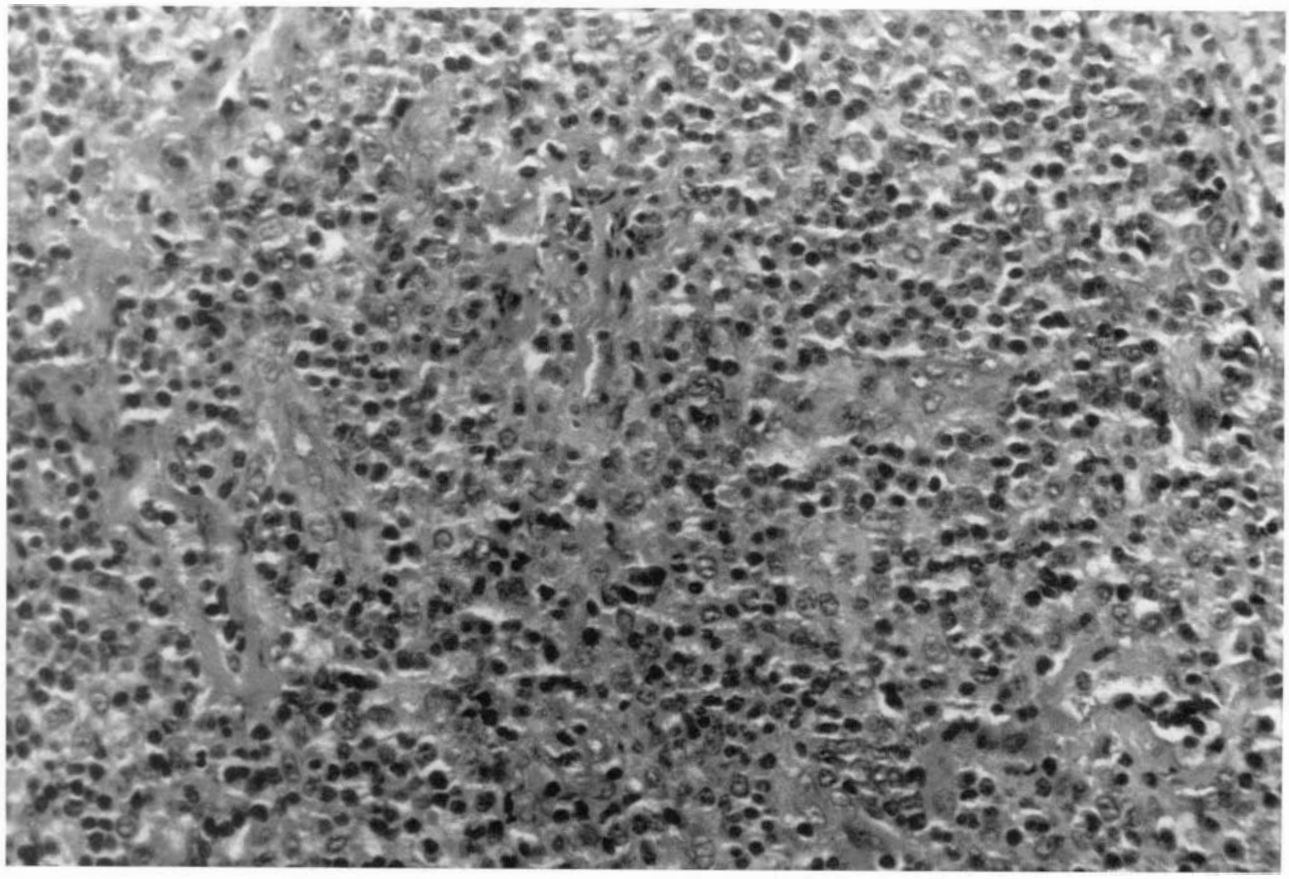

FIG. 2b

The interlymphoid area composed of hyperplastic blood vessels lined by plump endothelium. There is heavy infiltration by mature eosinophils, plasma cells and histiocytes (H & E; × 200).

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However, more recently the literature supports the view that Kimura's disease and ALHE are separate entities, both clinically and histopathologically (Kung *et al.*, 1984; Googe *et al.*, 1987).

We report a case of Kimura's disease, which is a rare condition, especially in Arabs and we review the current knowledge of the pathogenesis, presentation and treatment of this poorly understood disease.

Case report

A 19-year-old male Bahraini patient attended the ENT clinic with a history of swelling in the post-aural region on both sides since childhood. The swelling had been gradually increasing in size associated with occasional pain and itching. Physical examination revealed a swelling in both post-aural regions. The swelling on the right side was about 4 cm × 2 cm in size (Figure 1a). The skin over the swelling was normal. The swelling was firm in consistency, non-tender and mobile. The margins were diffuse. A similar but smaller swelling was seen in the left post-aural region (Figure 1b). Clinically the condition was diagnosed as non-specific lymphadenitis. The rest of the ENT examination was unremarkable. A pre-operative full blood count examination showed a total WBC count of 9000 μl with an eosinophilia of 17 per cent. The right post-aural mass was excised under general anaesthesia and submitted for histopathology.

Histologically the lesion was situated in subcutaneous fat, where there was a combination of blood vessel proliferation and marked lymphoid aggregation with germinal centres, some of which contained interstitial fibrosis and deposits of a proteinaceous material (Figures 2a and b). There was extensive infiltration by eosinophils with occasional eosinophilic abscess formation. These features are consistent with Kimura's disease.

In view of the diagnosis of Kimura's disease, serum IgE level was estimated and was markedly elevated (1134 μg). Subsequently, the left post-aural mass was also excised uneventfully, which also revealed histologically Kimura's disease. The patient has been followed-up in the ENT clinic regularly. So far after one year, the patient shows no evidence of recurrence.

Discussion

Kimura's disease is more common in Orientals but can occur in other races too. This condition usually develops in young adults (reported mean age 27 to 40 years) with a male predominance (M:F = 5:1). The usual presentation in Kimura's disease is with discrete nodules or a localised swelling with diffuse margins. There is a prediliction for periauricular and submandibular regions. The onset is insidious, often of long duration (in terms of years). These are multiple nodules (bilateral or in multiple regions). These lesions are situated in the subcutaneous and deep soft tissue, major salivary glands and lymph nodes. Superficial dermal and visceral involvement is rare. The lesions of Kimura's disease can occur in parts of the body other than in the head and neck (axilla, groin, limb and trunk etc). In addition, systemic findings including peripheral eosinophilia and elevated serum IgE levels are almost always present. Kimura's disease can be confused clinically and histologically with angio lymphoid hyperplasia with eosinophilia (ALHE), (Chan *et al.*, 1989). The ALHE lesions consist of small erythmatous dermal papules or nodules in the head and neck regions. These lesions itch and bleed easily. In general, there is no lymphadenopathy and peripheral eosinophilia is less common (fewer than 20 per cent of the cases).

The pathogenesis of Kimura's disease is obscure. Some view it as a neoplasm which is disputed strongly. An atopic reaction to a variety of agents appears to be an alternative hypothesis. This hypothesis has gained some support, due to variable histological features depending on the site, duration of the lesion, mast cell hyperplasia, a polymorphic lymphoplasmaotic infiltrate with reactive germinal centres, together with blood eosinophilia and raised IgE levels. All these features have been established in our case. Infectious agents have been incriminated but not proven as possible causes. The discovery of cryoglobulins (IgG, IgM, IgA) in one patient's serum (Grimwood *et al.*, 1979), and an association with renal disease (Yamada *et al.*, 1982) lend support to the theory that Kimura's disease is a manifestation of an abnormal immunological response. Trauma was also suggested (Oslen and Helwig, 1985) as a possible cause but in fewer than 10 per cent of cases a history of trauma was given. In our case, there was no history of trauma or allergy and also there was no evidence of any systemic involvement.

In differential diagnosis, a key histological feature of Kimura's disease is the inflammatory infiltrate and the proliferation of high endothelial venules. The narrow lumina of venules can be readily distinguished from uncanalised endothelial cell cords of ALHE, also known as epitheloid haemangioma, by scarcity of cytoplasm and a double row of endothelial cells. Also cellular atypia is never seen in Kimura's disease (Kung *et al.*, 1984; Googe *et al.*, 1987; Chan and McGuire, 1992). The IgE deposits in the germinal centres of Kimura's lesions (as reported by Ishikawa *et al.*, 1981) may be an important differentiating feature. The other conditions to be considered for differential diagnosis clinically are lymphoma, salivary gland tumours and Mickulicz disease (Kuo *et al.*, 1988). A healing abscess can be differentiated by its content of large numbers of polymorphs and histiocytes (Chan and McGuire, 1992). The clinical course is progressive but often becomes stationary after a few years. Various modalities of treatment (surgical excision, steroids, radiation) have been tried. However, recurrence is common (15–40 per cent) but there is no fatality. Malignant transformation has never been documented. Rarely there may be associated proteinuria with or without nephrotic syndrome (Yamada *et al.*, 1982).

In view of the presentation in the head and neck region with a mass or nodular lesion resembling neoplastic disease, Kimura's disease should be considered in the differential diagnosis. An awareness of the clinical picture of Kimura's disease is especially crucial in cases where only the lymph node biopsy specimen is available for initial evaluation.

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