Diffuse xanthomatous eruption

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A 37-year-old non-smoker with no history of drug allergy and history of childhood asthma presented with itchy rash over his back for 1 month, which progressed to involve his limbs and both axillae, in January 2013. The patient was not taking any medication apart from health supplements. He did not have any complaints of joint pain or fever. He was seen by a general practitioner who managed the rash as viral infection. Family history of hyperlipidaemia was negative. On examination, the patient was an obese man with body mass index of 32 kg/m^2, blood pressure of 152/89 mm Hg, and pulse rate of 100 beats/min. There were widespread, reddish-yellow papular eruptions over both sides of the trunk and limbs, sparing the face, scalp, oral cavity, and ears (Fig 1). There were no scales, vesicles, pus formation, or erosions. The size of the lesions ranged from to 0.1 cm to 0.4 cm (Fig 2). There was no corneal arcus, regional lymphadenopathy, abdominal organomegaly or arthropathy. A skin biopsy of the lesion showed features of eruptive xanthoma (Figs 3 and 4). Fasting blood examination showed markedly elevated levels of total cholesterol (12.1 mmol/L), serum triglycerides (40.36 mmol/L), and plasma glucose (14.7 mmol/L). Thus, he was urgently referred to an endocrinologist.

Discussion

Eruptive xanthoma is a benign lesion and patients usually consult because of itchiness or for cosmetic reasons. Morbidity arises from metabolic complications such as acute pancreatitis or myocardial infarction. The macroscopic lesions arise from phagocytosis in the dermis of plasma lipoproteins that leak from capillaries.[1] Laboratory workup is mandatory to exclude diabetes, nephrotic syndrome, or hypothyroidism. Screening of family members

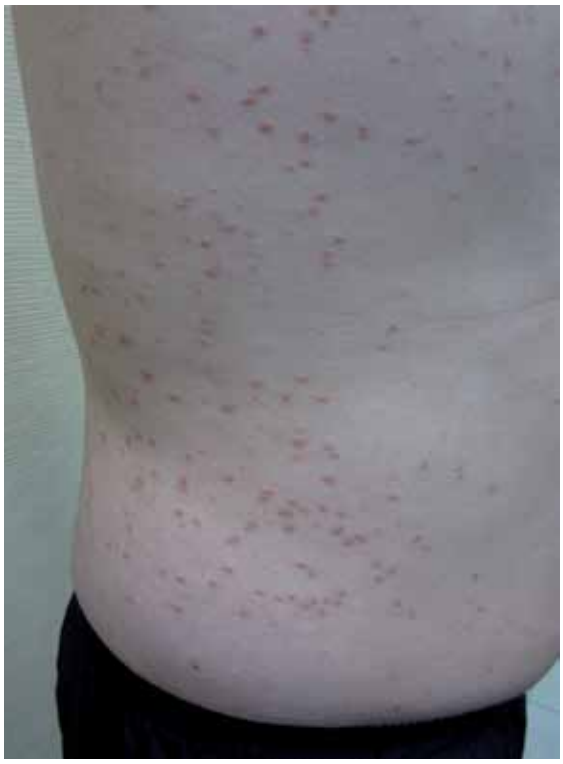

FIG 1. Clinical photo showing diffuse eruption on the trunk

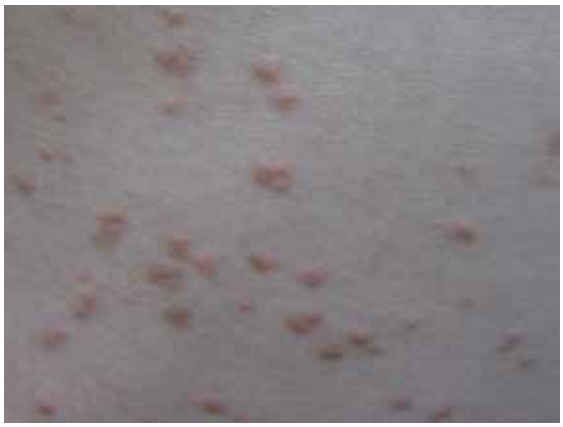

FIG 2. Close-up view demonstrating the colour, surface contour, and configuration of the lesion. Note also the absence of epidermal change

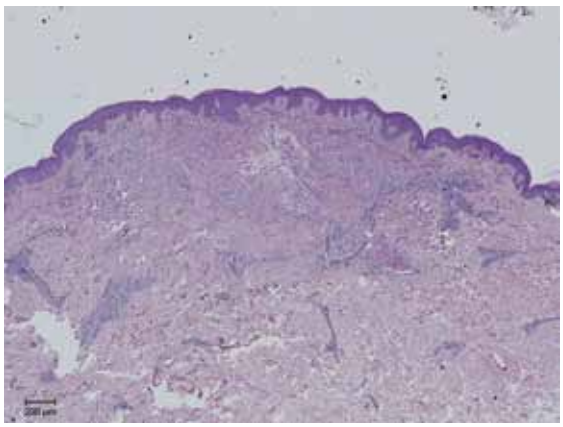

FIG 3. A wedge-shaped dermal lesion consists of histiocytes and lymphocytic infiltration (H&E; original magnification, x 40)

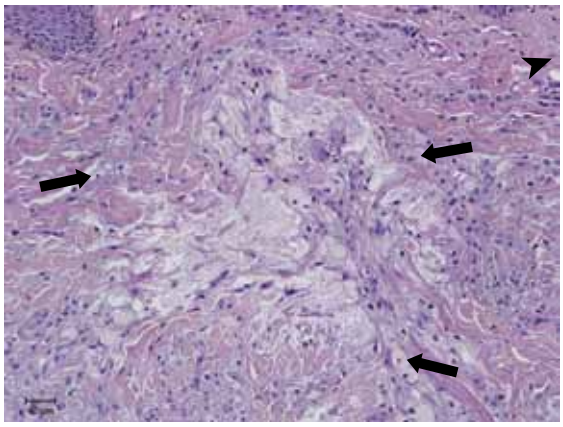

FIG 4. Characteristic lace-like granular material between collagen in the dermis is shown. Note the presence of foamy histiocytes (arrows) with admixed lymphocytes (arrowhead). Neutrophils are not conspicuous in this case (H&E; original magnification, x 200)

is essential as genetic factors may contribute in the development of the condition.[2] Eruptive xanthoma can occur in individuals with normal lipid levels.[3] Under these circumstances, it is prudent to exclude occult malignancy (eg lymphoproliferative disorders and monoclonal paraproteinaemia) or infections (eg human immunodeficiency virus infection).[4] Solitary lesions necessitate enquiry about previous local trauma, dermatoses, or surgical operation for Köbner phenomenon might have happened.

Differential diagnoses include eruptive xanthogranuloma, xanthoma disseminatum, and Langerhans cell histiocytosis (LCH). Xanthogranuloma usually arises in the head-and-neck regions of children. It is mostly a solitary, small-sized papule or nodule. Ophthalmologic evaluation is indicated if ocular involvement is suspected. Histopathology shows collection of lipidised histiocytes, inflammatory infiltrates, and Touton giant cells in the dermis. Known as non-LCH, xanthoma disseminatum is a non-familial histiocytic disorder. Mucocutaneous as well as systemic involvement has been reported. It shares similar histopathological features with eruptive xanthogranuloma but eosinophils may be absent, and Touton giant cells may be inconspicuous. Treatment, by far, is unsatisfactory. Langerhans cell histiocytosis comprises a spectrum of disorders with varied clinical manifestations including cutaneous involvement. Confirmation of diagnosis rests on histopathology. Within the lesion is dense infiltration by abnormal Langerhans cells which are characterised by their folded nuclei. Presence of a mixed inflammatory infiltrate with eosinophils in the background forms the classical picture of LCH. The Langerhans cells in LCH differ from the typical Langerhans cells by the lack of dendritic cell processes, and this feature is best demonstrated by CD1a immunostaining. All these differential diagnoses lack the characteristic deposits of lace-like material between collagen seen in eruptive xanthoma.

Gradual resolution of the cutaneous lesions is usually expected upon normalisation of lipid level in patients with eruptive xanthoma. En-bloc surgical excision or carbon dioxide laser vaporisation is equally practical, depending on the extent of the disease. The use of carbon dioxide laser has been reported in a skin phototype VI patient with xanthoma disseminatum with cosmetically acceptable post-inflammatory hyperpigmentation.[5] Finally, referral to a physician is needed in patients with concomitant metabolic syndrome.

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