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Case Report

Bilateral Axillary Multiple Tuberous Xanthomas – A Rare Case Report

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Abstract

The term xanthoma is derived from Greek 'xanthos' meaning yellow describing a variety of subcutaneous lipid deposits. xanthomas contain macrophages loaded with cholesterol and cholesterol esters. A 48 year old male patient presented to us with multiple large growths in both his axillae for past 4 years with recent history of bleeding from these swellings since 1 week. Investigations revealed deranged lipid profile. Dermatoscopic examination was performed. A local surgical excision with primary closure of the defect was done and histopathological examination was suggestive of tuberous xanthomas. This case is reported for its rarity, as multiple tuberous xanthomas in both the axillae is unusual.

Keywords: Axilla; Hyperlipidemia; Rare Surgery, Tuberous xanthoma

Introduction

Xanthomas are exogenous tumor like deposits of lipids in the skin and subcutaneous tissue [1]. They are disorders of lipid metabolism caused either by a primary genetic defect, secondary to other disorders, or both. Lesions are clinically distinguished due to a yellow hue imparted by the carotene containing lipids in the foam cells [2]. The clinical subtype provides an underlying diagnostic clue. Cutaneous xanthomas are morphologically divided into following types: plane xanthomas, tuberous xanthomas, tendon xanthomas, xanthelasma, and eruptive xanthomas. Tuberous xanthomas occur in patients with familial hypercholesterolemia, familial dysbetalipoproteinemia, cerebrotendinous xanthomatosis, β sitosterolemia and rarely in cases of secondary dyslipoproteinemias [3,4]. Tuberous xanthomas usually present on the knees, elbows or buttocks as painles, firm yellow-red nodules [5]. We present a case of multiple tuberous xanthomas in both the axillae with elevated lipid profile and no other systemic abnormalities. This case is being reported for it presentation at an unusual site.

Case Report

A 48 year old obese male patient presented to our OPD complaining of multiple elevated masses in the axilla since the last 4 years. He now complains of bleeding since past 1 week in the left axilla. On physical examination multiple skin coloured nodules and polypoidal growths of size varying between 0.5 x 0.5 cm to 5 x 5 cm. They give a bunch of grapes like appearance with lobulated surface in both axilla (Figure 1). Multiple bleeding points are noted on the nodules in the left axilla (Figure 2). On palpation they appear

to be mobile, firm, non-tender. Based on the clinical finding's differential diagnoses of tuberous xanthomas, neurofibromatosis, giant acrochordons, and reticulohistiocytosis were considered. Laboratory studies revealed abnormal levels of triglycerides, high-density lipoprotein and very low-density lipoprotein measuring at 258 mg/dl, 28 mg/dl, and 51.6 mg/dl respectively. Other laboratory investigations were within normal limits. ECG revealed no cardiac abnormalities. Correlating clinical findings with biochemical results we narrowed down the diagnosis to tuberous xanthomas. Dermoscopic examination showed multiple arborizing blood vessels on yellowish background (Figure 3). Patient insisted on removal of the lesions due to discomfort and difficulty in wearing clothes. Hence a local surgical excision of the lesions (Figure 4), with primary closure (Figure 5) was done on both the axilla under general anesthesia. Postoperative recovery was uneventful without any complications. The specimen was sent for histopathological examination. On histopathology the specimen showed sheets of foamy histiocytes, macrophages and touton type of giant cells in the dermis (Figure 6 & 7). 1 year follow-up was uneventful with well settled scars (Figure 8).

Figure 1: Right (R) and Left (L) axilla showing large nodular and pedunculated xanthomas.

Figure 2: Multiple bleeding points noted on nodules of left axilla.

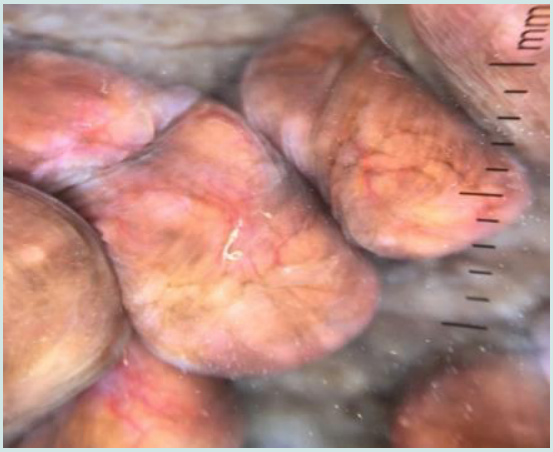

Figure 2: arborizing blood vessels noted over diffuse yellow background.

Figure 4: Excised lesions

Figure 5: Primary closure done.

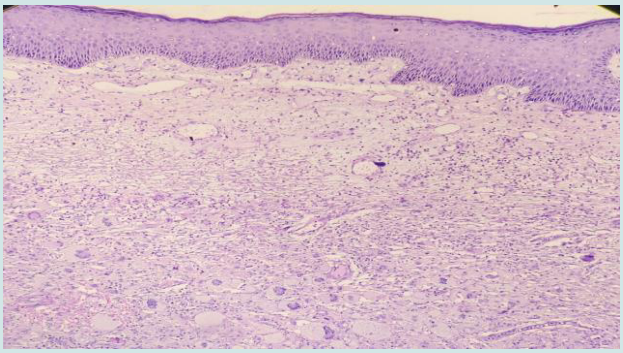

Figure 6: Low power view showing skin with lesion beneath composed of sheets of foamy histiocytes.

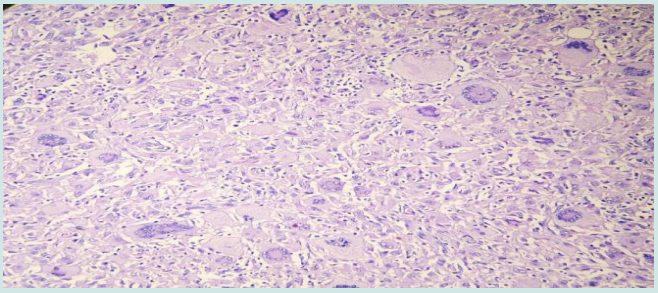

Figure 7: High power view showing sheets of foamy macrophages and touton type of giant cells.

Figure 8: One year follow up picture showing well settled scars.

Discussion

Xanthomas occur due to deranged lipid metabolism causing leakage from the vasculature into tissues, where they are phagocytosed by macrophages. Foam cells are formed from macrophages as a result of gradual intracellular lipid accumulation taken up by specific receptors or by the mechanism of phagocytosis. Promoters of macrophage migration into xanthoma lesion are increased E-selection on the endothelial cells and decreased intracellular adhesion molecule (ICAM)-1. Extravasated very low density lipoproteins also recruit more macrophages. Factors like friction, trauma and movement enhance the capillary leakage of low density lipoprotein, which correlates with anatomical locations of the xanthoma varients like tuberous, tendinous and xanthelesmata [4,5]. According to studies, majority of the cases >95% are xanthelesma palpebrarum. A recent prospective study found the even distribution between men and women with a prevalance of 4.4% [4]. Tuberous xanthomas initially present as small, soft papules that are easily mistaken for eruptive xanthomas, which coalesce and enlarge to become firm with increasing fibrosis. Such xanthomas suggest an alteration in lipid metabolism involving cholesterol or/and triglycerides. Among the xanthomas particularly eruptive and tuberous forms, have the tendency to wax and wane in corresponding to fluctuations in serum lipoproteins. Atherosclerotic vascular disease is also asoociated in such patients [6]. Multiple tuberous xanthomas specifically associate with hyperlipidemic state, although rarely certain xanthoma with normolipemic state are also reported [7]. Tuberous and tendinous xanthomas may have a close resemblance to other nodular eruptions over joints or tendons. Differentials include rheumatoid nodules, gouty tophi, subcutaneous granuloma annulare and erythema elevatumdiutinum but these are solitary in nature [8]. Grouped lesions may closely mimic neurofiromatosis, giant acrochordons and reticulohistiocytosis.

Conclusion

Multiple tuberous xanthomas in the flexures are a rare occurrence. They may be associated with normolipemic or hyperlipidemic states. Resection of the lesion is the treatment of choice due to its size and location. The chance of recurrence is very high in spite of adequate treatment, which warrants regular follow up for early detection and prompt intervention. Combined teamwork of both dermatologists and plastic surgeons may sometimes be required for successful treatment outcomes as evident in our case.

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