



Case Report

A case of eruptive xanthomas

Bin Xu and Ru-zhi Zhang*

Department of Dermatology, The Third Affiliated Hospital of Suzhou University, 185 Juqian Road, Changzhou, 213003, China.

*Corresponding author. E-mail: zhangruzhi628@163.com.

INTRODUCTION

A 27-year-old man with obesity presented with a 3-month history of progressive skin eruptions on the extensor surfaces of his extremities. The lesions were discrete, asymptomatic, yellowish papules to nodules. The patient had no history of fevers, chills or joint pain, and had not taken glucocorticoids or other drugs. Physical examination showed the lesions with areas of firm yellow-red papules (1–3 mm diameter) distributed on the patient's neck, trunk, buttocks and bilateral extremities (Figure 1), suggestive of eruptive xanthomas. The results of kidney and liver function tests were normal, as were the results of tests for fasting blood glucose, thyroid, stimulating hormone, triiodothyroxin, thyroxin, amylase and lipase. Histologic analysis of a biopsy specimen from a lesion showed an infiltration of nodular foam cells and a few multi-nucleate giant cells presenting within the dermis (Figure 2), which confirmed the suspicion that the lesions were xanthomas. The patient refused any further examination and was lost to follow up.





Figure 1: Erythematous to yellow papules approximately 1 to 3 mm in diameter distributed on the extensor surfaces of the patient's bilateral arms (1a-1b) and thighs (1c).

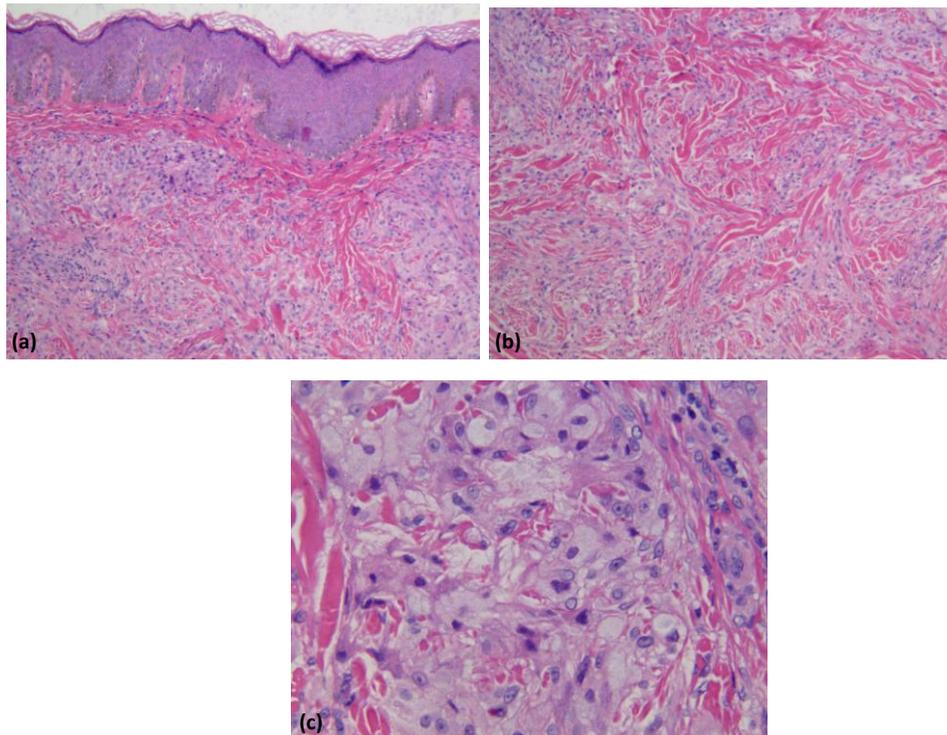


Figure 2: Infiltration of nodular foamy macrophages and a few multinucleate giant cells presenting in the dermis (H&E stain, 2a: 100x ; 2b : 400x).

DISCUSSION

Xanthomas are localized lipid deposits in the skin, tendons and subcutaneous tissues associated with lipid abnormalities (Zaremba et al., 2013). Clinically, xanthomas are yellowish papules, nodules or plaques. Histopathologically, xanthomas are plaques or nodules consisting of the accumulation of lipid-rich macrophages known as foam cells (Pai et al., 2014). The clinical presentations of xanthomas include eruptive, tuberous, eruptive, tendinous, planar, verruciform and papular forms.

In eruptive xanthomas, small yellow papules arising from a slightly wider red base develop over the buttocks and thighs and the extensor surfaces of the arms and legs. The lesions typically appear suddenly in multiples, with no subjective complaints. Early lesions may have an erythematous halo and are associated with pruritus and tenderness¹. A Koebner reaction may occur. Histologically, eruptive xanthomas are characterized by dermal infiltrations of neutrophils, eosinophils and histiocytes with foam cells along with extravascular lipid deposits in the form of lace-like eosinophilic material between the collagen bundles.

Eruptive xanthomas are usually associated with hypertriglyceridemia but can also be seen in patients with obesity, uncontrolled diabetes (Kolarova et al., 2014), lipoprotein lipase deficiency (Park et al., 2005), pregnancy, hypothyroidism, as well as after treatment with intravenous retinoids and/or ritonavir therapy. Treatments involve management of the underlying condition and lesions usually resolve within weeks to months. Patients should also be counseled on lifestyle changes, including weight control, adopting a low fat diet, exercising and quitting smoking.

ACKNOWLEDGMENTS

The authors are very grateful to Professor V.J. Hearing for his careful English language editing of the manuscript. The work was supported by the National Natural Science Foundation of China (Grant No. 81673078).

REFERENCES

- Kolarova H, Tesarova M, Svecova S, Stranecky V, Pristoupilova A, Zima T, Uhrova J, Volgina SY, Zeman J, Honzik T (2014). Lipoprotein lipase deficiency: clinical, biochemical and molecular characteristics in three patients with novel mutations in the LPL gene. *Folia Biol (Praha)*. 60(5): 235-243.
- Pai VV, Shukla P, Bhohe M (2014). Combined planar and eruptive xanthoma in a patient with type IIa hyperlipoproteinemia. *Indian J Dermatol Venereol Leprol*. 80: 467-470.
- Park JR, Jung TS, Jung JH, Lee GW, Kim MA, Park KJ, Kim DR, Chang SH, Chung SI, Hahm JR (2005). A case of hypothyroidism and type 2 diabetes associated with type V hyperlipoproteinemia and eruptive xanthomas. *J. Korean Med. Sci.* 20(3): 502-505.
- Zaremba J, Zaczekiewicz A, Placek W (2013). Eruptive xanthomas. *Postepy Dermatol Alergol*. 30(6): 399-402.