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Eruptive xanthoma

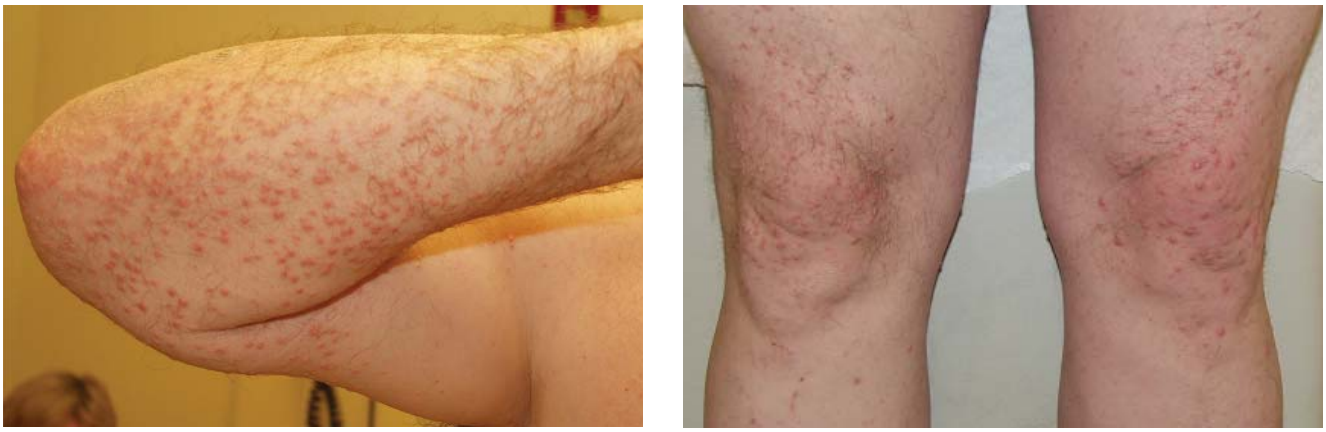

FIGURE 1. Small, reddish-yellow papules over the extensor surface of the right forearm and both knees at the time of presentation.

An obese 50-year-old man with hypertension, hyperlipidemia, recently diagnosed diabetes, and a history of grand mal seizures presented to the emergency room complaining of skin rash for 1 week. He denied having fever, chills, myalgia, abdominal pain, visual changes, recent changes in medications, or contact with anyone with similar symptoms.

He was a smoker, with a history of 20 pack-years; he denied abusing alcohol and taking illicit drugs.

He had no family history of diabetes, peripheral vascular disease, or coronary artery disease. His medications included lisinopril, simvastatin, niacin, metformin, and phenytoin.

On physical examination, the lesions were small, reddish-yellow, nonpruritic tender papules covering the extensor surfaces of the knees, the forearms, the abdomen, and the back (**FIGURE 1**). Laboratory test results:

- Total cholesterol 1,045 mg/dL (reference range 100–199)
- Triglycerides 7,855 mg/dL (30–149)
- Thyroid-stimulating hormone 0.52 mIU/L (0.4–5.5)
- Fasting blood glucose 441 mg/dL (65–100)
- Hemoglobin A_{1c} 12.6% (4.0–6.0)
- Total protein 7.2 g/dL (6.0–8.4)
- Albumin 4 g/dL (3.5–5.0)
- Creatinine 1 mg/dL (0.70–1.40)
- Glomerular filtration rate 79 mL/min/1.73 m^2 (> 60)
- Urinalysis showed no proteinuria.

Histologic analysis of a lesion-biopsy specimen showed dermal foamy macrophages and loose lipids, which confirmed the suspicion of eruptive xanthoma.

The patient was started on strict glycemic and lipid control. Metformin and statin doses were increased and insulin was added. Three months later, laboratory results showed total cholesterol 128 mg/dL, triglycerides 164 mg/dL, fasting blood glucose 88 mg/dL, and hemoglobin A_{1c} 5.5%. This was accompanied by marked improvement of the skin lesions (**FIGURE 2**).

CAUSES AND DIFFERENTIAL DIAGNOSIS

Eruptive xanthoma is a cutaneous disease most commonly arising over the extensor surfaces of the extremities and on the buttocks and shoulders, and it can be caused by high levels of serum triglycerides and uncontrolled diabetes mellitus.[1] Hypothyroidism, end-stage renal disease, and nephrotic syndrome can cause secondary hypertriglyceridemia,[2] which can cause eruptive xanthoma in severe cases. Patients with eruptive xanthoma may also have ophthalmologic and

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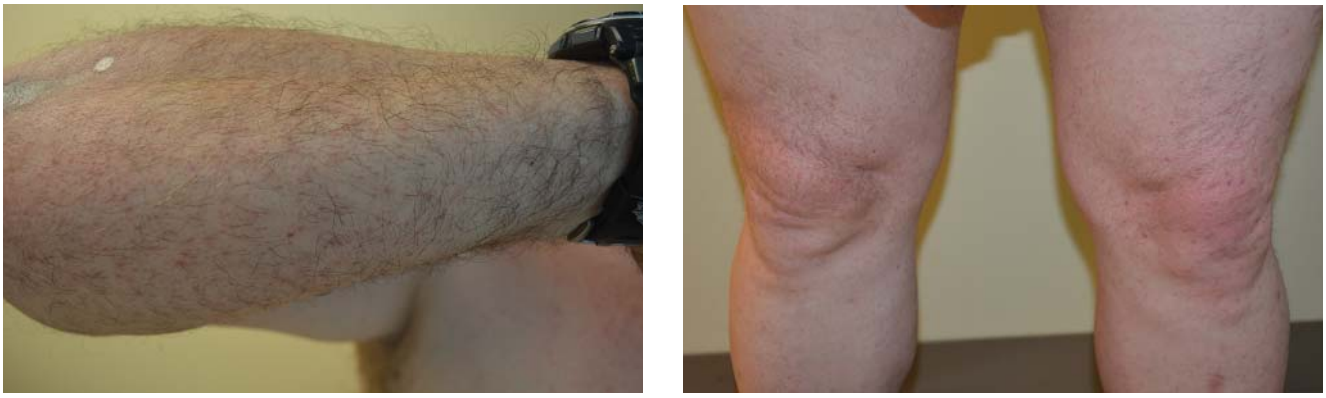

FIGURE 2. Resolution of the lesions on the right forearm and the knees after several months of treatment.

gastrointestinal involvement, such as lipemia retinalis (salmon-colored retina with creamy-white retinal vessels), abdominal pain, and hepatosplenomegaly.[3]

Other types of xanthoma associated with dyslipidemia include tuberous, tendinous, and plane xanthoma. Tuberous xanthoma is a firm, painless, deeper, red-yellow, larger nodular lesion, and the size may vary.[4] Tendinous xanthoma is a slowly enlarging subcutaneous nodule typically located near tendons or ligaments in the hands, feet, and the Achilles tendon. Plane xanthoma is a flat papule or patch that can occur anywhere on the body.

Eruptive xanthoma most commonly arises over extensor surfaces of the extremities, and on the buttocks and shoulders

The differential diagnosis includes disseminated granuloma annulare, non-Langerhans cell histiocytosis (xanthoma disseminatum, micronodular form of juvenile xanthogranuloma), and generalized eruptive histiocytoma. Eruptive xanthoma is differentiated from disseminated granuloma annulare by the abundance of perivascular histiocytes and xanthomized histiocytes, the presence of lipid deposits, and the deposition of hyaluronic acid on the edges.[5] Xanthoma disseminatum consists of numerous, small, red-brown papules that are evenly spread on the face, skin-folds, trunk, and proximal extremities.[6] Juvenile xanthogranuloma occurs mostly in children and is characterized by discrete orange-yellow nodules, which commonly appear on the scalp, face, and upper trunk. It is in most cases a solitary lesion, but multiple lesions may occur.[7] Lesions of generalized eruptive histiocytoma are firm, erythematous or brownish papules that appear in successive crops over the face, trunk, and proximal surfaces of the limbs.

TREATMENT

Treatment of eruptive xanthoma involves dietary restriction, exercise, and drug therapy to control the hyperlipidemia and the diabetes.[2] Early recognition and proper control of hypertriglyceridemia can prevent sequelae such as acute pancreatitis.[3]

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