

### Case 13.1

A 52-year-old Thai woman from Bangkok

**Chief complaint:** Multiple firm papules and nodules on face and body over 6 months

**Present illness:** The patient has presented with multiple firm, pruritus papules and nodules on face which was increasingly spread to her neck, anterior chest wall and both palms for over 6 months

#### Past history

- Bilateral carpal tunnel syndrome, OA knee, Trigger thumb
- Current medications are Glucosamine (1500 mg) 1x1, Naproxen 1x2, Losec 1x1, B1-6-12 1x3

#### Personal history

Heavy alcohol consumption when she was young.

#### Family history

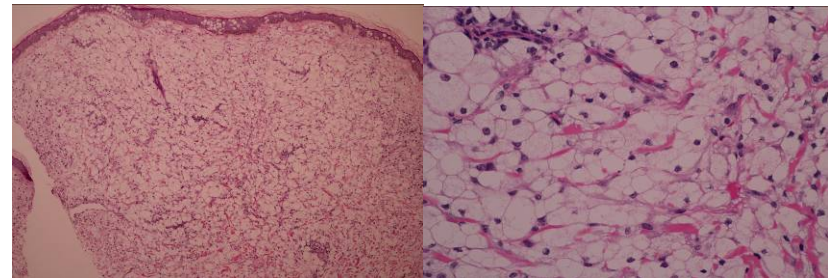
She denied family history of related skin disease and dyslipidemia.

#### Skin examination

Multiple indurated skin-colored and yellowish papules, nodules confluence to plaques on face, anterior chest wall, palms, and extremities

#### Histopathology (S11-3511B)

Diffuse inflammatory-cell infiltrate of foamy histocytes in the upper dermis



**Investigation:** Lipid profiles are normal.

**Diagnosis:** Eruptive Xanthoma

**Treatment:** Advice and follow up

### Case 13.2

A 39-year-old Thai man from Ayutthaya

**Chief complaint:** Multiple yellowish papules on body for 3 years

**Present illness:** The patient has developed numerous yellowish and skin-colored papules on back, both elbows and knees then gradually increase for 3 years without any symptoms.

#### **Past history**

No underlying diseases, No history of medications

#### **Personal history**

Present alcoholism

#### **Family history**

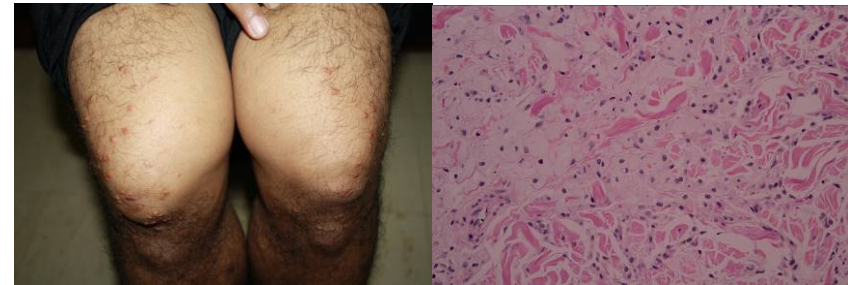
He denied family history of related skin disease and dyslipidemia.

#### **Physical examination**

Generalized, multiple discrete yellowish and skin-colored papules, some confluence into plaques on both elbows, knees, and back.

#### **Histopathology** (S11-6702)

Diffuse inflammatory-cell infiltrate of foamy histiocytes intermingled with perivascular infiltrate of lymphocytes in the dermis



**Investigation:** Total cholesterol 421 mg/dl, Triglyceride 7159 mg/dl, HDL 29 mg/dl

**Diagnosis:** Eruptive Xanthoma, Dyslipidemia

**Treatment:** Correct underlying causes, Diet control

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#### **Discussion:**

Xanthomas are clinical features commonly found with many kinds of different lipoprotein disorders or arise without any underlying metabolic effects.<sup>1-4</sup> They do not correspond to a disease but rather are symptoms. The lesions are characterized by small, erythematous-to-yellow cutaneous papules measuring 1-4 mm. Early lesions may have an erythematous halo and are associated with pruritus and tenderness.<sup>5-7</sup> A Koebner reaction may occur.<sup>8, 9</sup> Xanthomas could be found as a result when there are abnormalities in the transportation of lipids such as cholesterol, triglycerides and phospholipids.<sup>2-4, 10</sup>

There are various types of xanthomas classified clinically which have particular clinical phenotypes associated with specific lipid metabolic defects. (Table 1)<sup>4</sup>

**Table 1** summarized the clinical presentations and disease associated of Xanthomas

Type of Xanthomas	Disorders/conditions associated
Eruptive	Familial lipoprotein lipase deficiency (type I) Apo-C2 deficiency (type I), Type IV,V hypertriglyceridaemia, Obesity, DM, Retinoid, Estrogen
Tuberous	Familial hypercholesterolemia (type II)
Tendinous	Familial dysbetalipoproteinemia (type III)
Planar ; Palmar Intertriginous Diffuse Xanthelasma	Familial dysbetalipoproteinemia (type III) Familial homozygous hypercholesterolemia Monoclonal gammopathies Familial hypercholesterolemia (type II) Familial dysbetalipoproteinemia (type III)

Eruptive xanthoma is a form of xanthomas which arise abruptly in crops and coalesce into patches on the extensor surface of arms, legs, and buttocks, but possibly more generalized. There are two types of eruptive xanthoma according to degree of plasma lipid level ; normal or those with an underlying hypertriglyceridaemia, which is further subdivided into familial and acquired forms.<sup>6, 7, 10</sup> These skin lesions often arise when a patient's triglyceride level is greater than 1,000 mg/dL (11.29 mmol/L).<sup>10</sup>

Normolipaemic xanthomatosis can be diagnosed consequently from several conditions ; Altered lipoprotein content or structure, the presence of paraproteinaemia, haematopoietic diseases such as histiocytosis, myelomas, local trauma and oedema. Other causes such as pregnancy and acquired total lipodystrophy have been reported.<sup>5, 6</sup>

Hypertriglyceridaemia xanthomatosis associated with both primary and secondary hypertriglyceridemia, with primary hypertriglyceridemia observed in type I (elevated chylomicrons), type IV (elevated VLDLs), and type V (elevated chylomicrons and VLDLs) dyslipidemias. Type I and V are autosomal recessive with absent lipoprotein lipase or its activator, apoprotein C-II. While type IV is autosomal dominant and the catabolism of triglycerides rich lipoprotein is reduced with overproduction of very low-density lipoproteins (VLDL). Moreover, other inherited metabolic diseases such as lysosomal storage diseases and type I glycogen storage disease (Von Gierke's) may probably give rise to elevated triglycerides and results in eruptive xanthoma.<sup>10</sup>

Finally, The acquired form includes the spectrum of diseases and conditions which commonly resulted in dyslipidemia, for example; diabetes mellitus, alcoholism, obesity, chronic renal failure, nephrotic syndrome, pancreatitis, hypothyroidism and biliary cirrhosis. Medications including estrogens, corticosteroids, miconazole, isotretinoin, and etretinate can lead to elevated lipid level.<sup>4-6</sup>

The pathogenesis of eruptive xanthoma caused by any conditions that increase the relative vascular permeability to lipoproteins which facilitates its leakage through dermal capillaries results in the deposition of lipid resemble substances in the skin. The foam cells in dermis can be visible as a result from direct phagocytosis of lipoproteins by dermal histiocytes or a reactive process involving in-situ lipid synthesis in the histiocytes. Histopathologically, foamy macrophages are present in the dermis with an inflammatory infiltrate of lymphocytes and neutrophils.<sup>7, 11, 12</sup>

Treatment involves identifying and correcting the underlying cause of the hypertriglyceridemia. Eruptive xanthomas may spontaneously resolve within weeks but often require correction of

the patient's hypertriglyceridemia. Generally, a low carbohydrates and saturated fat diet is the first treatment of choice. Anti-hyperlipidaemic agents should be considered when dietary control fails.<sup>3, 4, 6</sup>

We reported two cases of eruptive xanthoma which have two different lipid profiles. The first case should properly referred as normolipaemic xanthomatosis. While the second case can be categorized into hypertriglyceridaemia xanthomatosis type. However, the cause for this condition in the first case still equivocal, further investigation should be applied.

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