



## Tendinous Xanthoma-A Case Report

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### Abstract

Tendinous xanthomas are asymptomatic and slow-growing subcutaneous nodules that appear most commonly in on the upper and lower extremities, in the normal overlying skin. The mechanisms of action that include xanthoma formation are less known. It has been found in patients with familial hypercholesterolemia (FH), an inherited disorder caused by mutations in the low-density lipoprotein receptor gene. We present a 42-year-old patient with tendinous xanthomas who diagnosed as FH due to dermatological examination.

**Keywords:** Xanthomas; Familial hypercholesterolemia; Lipid disorders; Tendo achilles

### Introduction

Tendinous and subcutaneous xanthomas are usually nodular deposits of lipid-filled macrophages in the achilles tendon, hands, feet, elbows, and knees. These nodules are often associated with familial hyperlipidemia, a group of diseases involving impaired cholesterol metabolism, or accelerated development of atherosclerotic plaques [1]. Xanthomas can be made early detection of hyperlipidemia and may provide preventive treatment that reduces the risk of morbidity and cardiovascular disease, including myocardial infarction [1,2]. In this article, we present a 42-year-old male patient with multiple xanthomas located in both elbows. A xanthoma could be a sharply demarcated yellow assortment of cholesterol beneath the skin, typically on or around the eyelids. Strictly, a xanthoma could be a distinct condition, known as a skin condition only if changing into larger and nodular, forward tumorous proportions. Still, it's typically classified merely as a subtype of skin condition. Xanthomas not continuously related to underlying lipidemia. Identification and treating underlying macromolecule disorders is critical to decrease the dimensions of the xanthomas and to stop the risks of induration of the arteries. In patients with severe hypertriglyceridemia, a significant goal is to stop rubor.

Treatment of the lipidemia at first consists of diet and lipid-lowering agents like statins, fibrates, gall acid-binding resins, probucol, or B vitamin. The lipid-lowering effects of those agents are well documented, however, few studies mention the efficaciousness of those medicine for resolution xanthomas.

Xanthomas can change in size. The developments might be as little as a pinhead or as expansive as a grape. They frequently resemble a level knock under the skin and some of the time seem yellow or orange. They, for the most part, don't bring on any torment. Notwithstanding, they may be delicate and irritated. There might be bunches of developments in a similar zone or a few individual developments on various pieces of the body.

The commonly observed xanthomas in the patients with familial hypercholesterolemia are tendinous xanthomas, as the average is around 50% and which are subcutaneous tumors located within the tendons used for extension and mainly affect the Achilles, patellar tendons and extensor tendons of the hands, buttocks, elbows, eyelids and hand creases. The main characteristic of tendinous xanthoma is the exceptionally high composition in free cholesterol and total cholesterol. It is usually accompanied by an increase in tendon size, caused not only by the intratendinous lipids but also by oedema and inflammation of the area.

Cholesterol is both great and terrible. At typical dimensions, it is a basic substance for the body. In any case, if fixations in the blood get excessively high, it turns into a quiet threat that puts individuals in danger of heart assault.

Cholesterol is a synthetic aggravate that the body requires as a structure obstructs for cell layers and for hormones like estrogen and testosterone. The liver creates about 80% of the body's cholesterol and the rest originates from dietary sources like meat, poultry, eggs, fish, and dairy items. Nourishments got from plants contain no cholesterol.

Cholesterol content in the circulation system is directed by the liver. After a supper, cholesterol in the eating regimen is ingested from the small digestive tract and used and put away in the liver. As the body requires cholesterol, it might be discharged by the liver.

At the point when a lot of cholesterol is available in the body, it can develop in stores called plaque along within dividers of conduits, making them limited.

The present study reports the case of a 42-year-old male patient with familial hypercholesterolemia, who presented with multiple large tuberous and tendinous xanthomas within various dermal tissues.

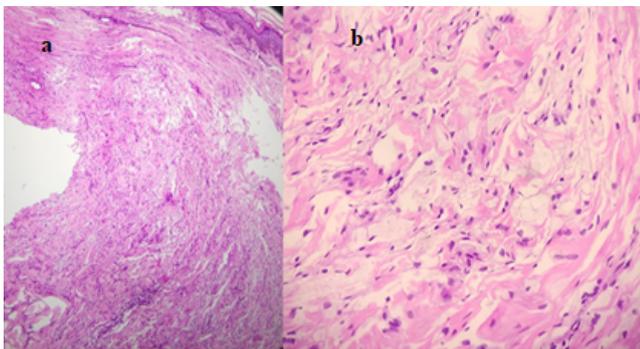
### Case Report

A 42-year-old male patient presented with a history of painful and gradually enlarged subcutaneous nodules that restricted joint movement. In the dermatological examination; In both elbows, were including the lateral and medial epicondylar area there were nodules with diameters ranging from 05 mm to 2 cm (Figure 1). Based in the laboratory, total cholesterol level: 448 mg/dl, low - density lipoprotein

LDL 190 mg/dl and triglyceride was 1122 mg/dl were high. With this results the lipid profile test was remarkable. Blood glucose, liver function tests, thyroid profile, chest X-ray, electrocardiogram, glucose tolerance test, and abdominal ultrasonography were normal. No signs of coronary artery disease were found. Histopathological examination revealed a large number of foamy cells, histiocytes, and lymphocytes that infiltrated in the dermis (Figure 2). His family history also shows increased total cholesterol and LDL/HDL ratio. With all this finding patient referred to internal medicine for lipid-lowering therapy.



**Figure 1:** Group nodules in both elbows, with a diameter of 0.5 cm to 2 cm, dark pinkish color.



**Figure 2:** a) Histology of xanthoma skin biopsy (H and E staining, 400x); b) A Large number of foamy cells, histiocytes, and lymphocytes infiltrating the dermis.

## Discussion

Xanthomas are usually caused by altered systemic lipid metabolism [2]. They usually can be seen as slowly expanding papules or subcutaneous nodules in tendons, ligaments, fascia, and periosteum [3]. Therefore, tendinous xanthomas should be considered in the differential diagnosis of other tumors such as rheumatoid nodules, giant cell tumors of the tendon sheath, ganglions, and xanthomatous altered sarcomas [4]. The diagnosis of tendinous xanthoma with familial hypercholesterolemia can be based on high LDL cholesterol (above 75 percent), high total cholesterol levels and family history of early cardiovascular disease [2]. Histopathologically, xanthomas are characterized by the presence of vacuolar macrophages in the dermis. These macrophages are filled with lipid droplets dissolved during tissue destruction [5]. The first step of treatment of xanthomas is the reduction of LDL levels. In addition, using statin drugs or ezetimibe together with dietary change (accompanied by counseling on alcohol, smoking and sedentary lifestyle risks) is part of treatment. In case of too large xanthomas or impeding joint function, surgical removal with skin graft is suitable [6].

## Conclusion

In conclusion, tendon xanthomas are pathognomonic for the familial hypercholesterolemia and for other disorder of lipid metabolism. This case shows the importance of dermatologists in the diagnosis of lipid disorders. Thus, early diagnosis and treatment will help in the prevention of early coronary artery disease and pancreatitis.

## References

1. Bermudez EB, Storey L, Mayo S, Simpson G (2015) An unusual case of multiple tendinous xanthomas involving the extremities and the ears. *Case Rep Dermatol* 7: 340-344.
2. Murphy GF, Sellheyer K, Mihm MC (2004) *The skin in cotran pathologic basis of disease*. (7th edn), Philadelphia, Elsevier, pp: 1248.
3. Hata Y, Shigematsu H, Tsushima M, Oikawa T, Yamamoto M, et al. (1981) Serum lipid and lipoprotein profiles in patients with xanthomas: A correlative study on xanthoma and atherosclerosis (I). *Jpn Circ J* 45: 1236-1242.
4. Huri G, Joachim N (2013) An unusual case of hand xanthomatosis. *Case Rep Orthop* 2013: 183018.
5. Kumar V, Abbas AK, Fausto N, Aster JCR (2010) *Cotran pathologic basis of disease*. (8th edn), Philadelphia, Saunders, Elsevier.
6. Ahn J, Chun T, Lee S (2011) Nodular excision for painful localized achilles tendon xanthomas I type II hyperlipoproteinemia: A case report. *J Foot Ankle Surg* 50: 603-606.