



CLINICAL AND BIOCHEMICAL PROFILE OF XANTHELASMA PALPEBRARUM PATIENTS IN TERTIARY CARE HOSPITAL IN PUNJAB

Dermatology

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KEYWORDS

Xanthelasma Palpebrarum, serum lipid profile, atherosclerotic heart disease

INTRODUCTION

The term Xanthelasma is derived from the Greek *xanthos* (yellow) and *elasma* (beaten metal plate). Xanthelasma Palpebrarum is a disorder which affects eyelids with symmetrical soft, yellowish brown velvety papules and plaques on the inner canthi of upper and lower lids. These have tendency to be multiple, progressive, permanent and coalescent. Xanthelasmas are seen in Familial Hypercholesterolemia, type III hyperlipoproteinaemia and chronic cholestasis (especially primary biliary cirrhosis), but are also often seen in people with circulating lipid levels normal in the western population. Xanthelasma Palpebrarum has been shown to have controversial association with plasma lipid abnormality. Its presence might suggest an underlying disorder of lipid metabolism. Patients with Xanthelasma Palpebrarum have lipid abnormalities ranging from 9.1%¹ – 67.9%². Since few studies are available in this regard in India, a prospective study was conducted to study the clinical profile and lipid abnormalities in diagnosed cases of Xanthelasma Palpebrarum in a tertiary care hospital in Punjab.

MATERIALS AND METHODS :

The study was conducted among diagnosed cases of Xanthelasma Palpebrum seeking health care, in Guru Gobind singh Medical College & Hospital, Punjab. Informed and written consent was taken from all the participants of the study.

The study was conducted in 60 clinically diagnosed cases of Xanthelasma Palpebrarum and 60 control. Each patient was subjected to a detailed history and a thorough clinical examination. Venous samples were collected after overnight fasting of 12 hours and subjected to investigation for the lipid profile.

RESULTS

We have found, in our study, a female predominance (75%). We have found the most common age group as 45-55 years (66.67%). Family history was present in 10% of patients. 90% of patients had both eyelid involvement and multiple lesions. 11.66% patients had associated hypertension while 8.33% had diabetes. (table 1)

Table 1-Various Clinical Parameters In Xanthelasma Palpebrarum Patients

	Number of patients	% of patients
Most common Age group (45-55 years)	40	66.67
Sex M	15	25
F	45	75
Duration of Xanthelasma (<12 months)	35	58.33
Family history	6	10
Multiple lesions	54	90
Both eyelids involvement	54	90
Associated any systemic disorders	12	20
1. Hypertension	7	11.66
2. Diabetes mellitus	5	8.33

Total cholesterol was raised in 35% of patients while 10% of control. Triglyceride level was abnormal in 25% of patients while 15% of control. LDL cholesterol level was raised in 40% of patients while 5% of control. HDL level was abnormal in 30% of patients while 10% of control. (table 2)

Table 2- Serum Lipid Profile In Xanthelasma Palpebrarum Patients And Control

LIPID PROFILE	NO OF PATIENTS	% OF PATIENTS	Number of control	% of control
TOTAL CHOLESTEROL mg/dl	<200	39	65	54
	>200	21	35	6
TRIGLYCERIDE mg/dl	<150	45	75	51
	>150	15	25	9
LDL CHOL mg/dl	<130	36	60	57
	>130	24	40	3
HDL CHOL mg/dl	<60	18	30	6
	>60	42	70	54

DISCUSSION

Xanthelasma usually appears during the middle age. Its prevalence is higher in females than in males and tends to increase with age. The exact cause is not known but multiple factors like lipid abnormalities³, hormonal factors^{4,5}, local factors and macrophages are attributed to play a role in its etiopathogenesis. Recently the role of acetylated LDL and macrophages with their scavenger receptors has been observed in the causation of Xanthelasma Palpebrarum. The frequently associated diseases or events are cardiovascular diseases, diabetes and obesity⁶. The relation between Xanthelasma Palpebrarum and serum lipid profile still remains disputed. The present work was planned to estimate Serum Fasting Lipid Profile in controls and patients clinically diagnosed with Xanthelasma Palpebrarum and to find a possible correlation between the measured parameters and the disease condition under study.

Xanthelasma has been quoted to be more common in females⁷. We have found, in our study, a female predominance (75%) in keeping with the other studies on the subject. This may be because females are more conscious cosmetically and present at a health care center sooner than male subjects after development of Xanthelasma Palpebrarum. We have found the most common age group as 45-55 years (66.67%). Family history was present in 10% of patients. 90% of patients had both eyelid involvement and multiple lesions. 11.66% patients had associated hypertension while 8.33% had diabetes.

Total cholesterol was raised in 35% of patients while 10% of control. Triglyceride level was abnormal in 25% of patients while 15% of control. LDL cholesterol level was raised in 40% of patients while 5% of control. HDL level was abnormal in 30% of patients while 10% of control.

A long duration of marked rise in LDL causes a load on cholesterol metabolism in peripheral tissues, which leads to accumulation of esterified cholesterol both in and out of the dermal cells^{8,9}. The high incidence of lipid abnormalities in Xanthelasma may be correlated

with atherosclerotic vascular changes which will inevitably be induced by a long and continued elevation in serum cholesterol or LDL10. But even then, some patients with Xanthelasma had normal values of serum lipids, stressing on the fact that not all xanthelasmas are a result of a deranged lipid metabolism. This may, in turn, indicate importance of some local factors in the pathogenesis of Xanthelasma. Changes in blood chemistry, especially the derangement of the lipid metabolism, may be interpreted as a sign of degeneration caused by the accumulation of esterified cholesterol in peripheral tissues including skin and may be an additional clue to elucidate the correlation between Xanthelasma and atherosclerosis10

CONCLUSION

We conclude that majority of patients with Xanthelasma Palpebrarum compared to control have abnormal lipid levels. So these patients may be at an increased risk of developing atherosclerotic heart disease and coronary artery disease due to dyslipidemia. So this group of patients requires early identification and treatment in order to retard atherosclerosis and prevent future complication of coronary heart diseases.

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