

Management of Xanthelasma at Chaha Eye Hospitals Kaduna- A Case Report

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SUMMARY: Many systemic conditions have eye manifestations which are often the earliest signs to give out such conditions. Xanthelasmas are such eye conditions that are commonly treated primarily as eye conditions; overlooking the systemic associations which are more life threatening.

The aim of these reports is to highlight the systemic associations of ocular xanthelasmas and the management modalities of the condition.

KEYWORDS: Xanthelasma, Systemic, Associations

INTRODUCTION

The xanthelasma is a sharply demarcated, yellowish deposit underneath the skin of cholesterol. They are usually found under the skin, the subcutaneous fats and tendons¹. Its most common position or site is on or around the eyelids' medial aspects and thus commonly referred to as Xanthelasma palpebrarum. It is usually painless and benign^{1, 2, 10}.

In these case studies we seek to highlight the common systemic associations of the disease and the management modalities

CASE REPORT -1

In this report we present a 50-year-old woman who presented with severe eye pain in the left eye and growths on the medial aspects of the upper eyelids of both eyes. Her medical history suggested that she has been a hypertensive case on antihypertensive drugs but not regimented with drugs.

Her general examination revealed an obese middle aged woman with blood pressures of 180/110 mmHg in the supine position. Her visual acuities were 6/6 in the right eye and 6/12+2 in the left eye unaided. There were well demarcated oval, horizontally elongated masses measuring between 1.5cm by 0.5cm and less than 0.5cm high respectively. The lesions were not tender and not mobile. There were no anterior segment abnormalities in the both eyes except for the injected conjunctiva and actively staining mid-peripheral corneal ulcer along the 3 o'clock position in the left eye, explaining the reason for the pains in the left eye. The lenses and vitreous cavities were clear in both eyes. The CDR's were also within normal. There were however moderate hypertensive retinopathies in both eyes. We made impressions of bilateral upper lid xanthelasma, bilateral hypertensive retinopathy and left mid-peripheral corneal ulcer. The patient was successfully treated of the left corneal ulcers with both topical and systemic antibiotics together with topical cycloplegics. Her blood pressure was controlled on antihypertensive drugs including Nifedipine, moduretics and lexotan.

Her laboratory investigations revealed the following:

FBC= WITHIN NORMAL LIMITS

HB=12g/dl

FBS= 5.6MMOL/L

TOTAL CHOLESTEROL =4.83MMOL/L (N= LESS THAN 6.14MMOL/L)

HDL = 2.06MMOL/L (N = MORE THAN 1.55MMOL/L)

LDL= 2.64MMOL/L (N = 1.3-3.7MMOL/L)

TRIGLYCERIDES = 1.00MMOL/L (N = 0.5 – 2.3MMOL/L)

THE BODY MASS INDEX = 30

She successfully underwent surgical excisional biopsy of the lesions and the histology report confirmed the diagnosis of xanthomas. She was discharged home but was lost to follow up however.



FIG.1: A 50-year-old female with bilateral upper lid xanthomas

CASE REPORT - 2

A 50 year old woman presented to us with complaints of blurring of vision, foreign body sensation and discrete swellings in the upper lids in both eyes. She denied any history of any systemic diseases including diabetes mellitus, hypertension or heart disease. Our examination revealed a fairly obese woman with BMI of 28 and BP of 160/105 mmHg otherwise stable vital signs. Her eye examinations revealed visual acuities of 6/9 which improved to 6/6 with pinhole in both eye. The lids were fairly normal but for the lumpy, mobile and non-tender growths on the upper lids which were situated more on nasal aspects, measuring about 1cm high and 1.5cm wide. There were nasal pingueculae in both eyes with early lens opacities and CDR's of 0.6 in both eyes.

FBC= WITHIN NORMAL LIMITS

HB=13.5g/dl

FBS= 6.3MMOL/L

TOTAL CHOLESTEROL =5.83MMOL/L (N= LESS THAN 6.14MMOL/L)

HDL = 2.15MMOL/L (N = MORE THAN 1.55MMOL/L)

LDL= 2.67MMOL/L (N = 1.3-3.7MMOL/L)

TRIGLYCERIDES = 1.40MMOL/L (N = 0.5 – 2.3MMOL/L)

THE BODY MASS INDEX (BMI) =28



FIG. 2 -Picture of Case 2 Patient

DISCUSSION

The xanthelasma is also known as the Xanthelasma Palpebrarum as it occurs mostly on or around the eyelids. It is a subtype of the Xanthomas or Xanthomata. It is commonly referred to as the Xanthoma particularly when it is enlarged, nodular or tumorous in nature. Though generally uncommon it is much less common in Africans and more in the Asians and the Mediterranean^{2,3}. In the United States it occurs more in women than men. Xanthelasmas may or may not have some hereditary association. Patients with no hereditary association have a very higher tendency of developing atheromatous disease which in turn causes hypertension³. Xanthomas are also more common in people of ages above 50 years but there is no sex preference⁴. Xanthomas are rare in children but once diagnosed the child should be investigated along the lines of disorders of lipid metabolism⁴. Cutaneous xanthomas associated with hyperlipidemia can be clinically subdivided into Xanthelasma palpebralis which is the commonest type,

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eruptive Xanthomas, the tendinous Xanthomas, tuberous Xanthomas, plane xanthomas and generalized plane xanthomas. The xanthomas not associated with hyperlipidemia are subdivided into two; xanthoma disseminatum and Xanthoma verruciform. ^{4, 5}. Xanthelasmas may occur in isolation or in association with other medical or systemic conditions ^{4, 5}.

The occurrence of xanthelasma in the region of the eyes makes many eye practitioners to manage them in isolation thus neglecting the life-threatening aspects of the disease as seeing in our cases which had hypertensive.

Our cases had no hereditary component as they denied any history of xanthelasma in the families. One case had severe hypertension (case 1) suggesting atheromatous disease but her lipid profile incidentally was normal unlike the typical xanthelasma case in literatures.

The xanthelasmas are almost always associated with hypercholesterolemia but the cutaneous manifestations occur before the hyperlipidemia and are histologically a collection of foamy histiocytes laden with intracellular fat deposits⁵. 50% of cases are associated with hyperlipidemia and it is possible to have xanthelasma with normo-lipidemic profile^{8,10}

The management of xanthelasma will include a detail history of the disease with general medical, social and family history of the patient. Detail systemic examination of the patient with particular attention to the cardiovascular system cannot be over emphasized. Laboratory examination with special attention to the lipid profile of the patient is highly advised. In our cases the lipid profiles were within normal limits but there was hypertension. The question therefore is what comes first in xanthelasma, the hypertension or the hyperlipidemia? Other tests that are necessary include the thyroid function test, the liver function test, the fasting blood and glycated hemoglobin test ¹⁰.

The treatment of the case will include both the medical and surgical approaches. Most patients are more concerned with the aesthetic aspects of the condition but the surgeon should be wary of the medical associations of the condition.

Both medical and surgical approaches are possible in the treatment of the local condition ⁶. Surgically, cryotherapy, laser applications using the carbon dioxide, erbium-YAG, pulsed dye and Nd- YAG electrodesiccations and surgical excisional biopsy are all modalities that can be employed to locally treat the condition ^{6,8}.

Hoon Young Lee, et al classified the Xanthelasma palpebrarum (XP) into four grades based on the extent and location of the lesions⁸, namely;

GRADE 1: Lesions involving only the upper lids

GRADE 2: Lesions involving the upper lid only but with extension into the medial canthal area

GRADE 3: Lesions involving both the upper and lower lids

GRADE 4: Lesions that are very extensive, involving both the upper and lower lids together with the medial and lateral aspects of the lids.



FIG. 3 – GRADE 3 DISEASE

While lesion in grades 1 and 2 will do well with laser treatment, the lesions in grade 3 and 4 will do better with surgical excision.⁸ Our two cases incidentally belong the grade 1 class of the disease.

Removal of xanthelasmas can cause as expected, some level of scarring and pigmentary changes but these are not too common after treatment ^{3, 6}. Use of parenteral Vitamin B₁₂ has been found helpful in at least reducing the size of xanthomas, while the use of oral simvastatin and topical application of Trichloroacetic acid have been found beneficial in the treatment of xanthelasma ^{6,7,9}.

Prophylactic management of the condition is advocated by a number of authorities. Though benefits are not clear, dietary restrictions such as low fat and cholesterol diets have been advocated with the aim of reducing blood triglycerides and cholesterol.

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Other measures being taken in order to reduce the lipid and cholesterol levels include weight losing exercises, reduction in smoking and use of lipid lowering drugs. The statins which are HMG-coA reductase inhibitors have been found very helpful in reducing the blood cholesterol levels by inhibiting the enzyme which produces the bad cholesterol (LDL) and triglycerides. The statins have also been found to increase the good cholesterol (HDL) in the blood and have been found quite useful in treating coronary heart diseases. Some of the common statins include: Atorvastatin(Lipitor), Simvastatin(Zocor), fluvastatin(Lescol), Pravastatin(Pravachol), Lovastatin(Mevacor) and Rosuvastatin¹¹. There are however side effects with the statins including: Headaches, dizziness, confusion and memory loss. Other side effects include nausea, gas, constipation, diarrhea, aching muscles and joints. In rare situations there may even be Liver damage and increased risks of type 2 diabetes¹².

SUMMARY AND CONCLUSION

There is more to xanthelasmas than the cosmetic significance of the disease. Any case of xanthelasma should be investigated along the lines of blood cholesterol and lipid profiles as hypercholesterolemia has been linked highly to xanthelasmas. The grave consequences of hyperlipidemia including atherosclerosis, hypertension and stroke must not therefore be overlooked. Dietary control, exercise aimed at weight loss with reduced tobacco consumption are some of the ways of reducing the risk of Xanthelasma. Use of lipid lowering drugs has also been found useful in the control of Xanthelasmas and other cholesterol related diseases.

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