EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 3
Issue: 12
416-418
Year: 2016

PRIMARY SYSTEMIC AMYLOIDOSIS: TWO DIFFERENT PRESENTATIONS

Waseem Raja,[1]*, MD, DNB . Rohey jan[, 2], MD, Fayaz A Wani, [1], MD.

[1] Department of Medicine (Gastroenterology division), Government Medical College Srinagar.
[2]Department of Critical care & Anesthesiology, SKIMS soura, Jammu & Kashmir, India

*** Corresponding Author Dr. Waseem Raja**
MD, DNB Department of Medicine (Gastroenterology division), Government Medical College Srinagar.

Article Received on 07/10/2016 **Article Revised on 27/10/2016** **Article Accepted on 16/11/2016**

ABSTRACT
Amyloidosis is a disease produced by the extra cellular deposition of heterogenic, misfolded proteins, amyloid fibrils, in various tissues. It usually manifests as a systemic disease characterized by multiple organ and tissue involvement. Rarely amyloidosis remains restricted to a single tissue or organ. We report two cases of amyloidosis: a 63 year old lady with primary localized cutaneous amyloidosis (PLCA) presenting with xanthomatous lesions over the trunk and a 61 year old man who had evidence of renal involvement in addition to the cutaneous lesions.

KEYWORDS:- Amyloidosis, Xanthomatous lesions, Renal involvement.

INTRODUCTION

Amyloidosis is a metabolic disease characterized by extracellular deposition of amyloid proteins in various tissues and organs. On the basis of the affected organs, amyloidosis is categorized into localized or systemic varieties. In the localized variant, pathological changes will be restricted to a single organ or tissue. Cutaneous lesions can occur as part of either systemic or localized amyloidosis. Here we report two cases of primary amyloidosis. One patient had the localized cutaneous variant, while the other had systemic involvement.

Case Report 1:-

A 63 year old woman presented with multiple asymptomatic yellowish swellings over the lower part of her trunk of three years duration. The lesions remained static after an initial increase in the size and number. Her medical history was otherwise insignificant.

Examination revealed multiple erythematous and waxy, infiltrated papules, plaques and Subcutaneous nodules with a yellowish tinge of sizes varying from 1x1cm to 5x4cm distributed over the lower abdomen and back [Figure 1]. They were firm in consistency and non-tender.

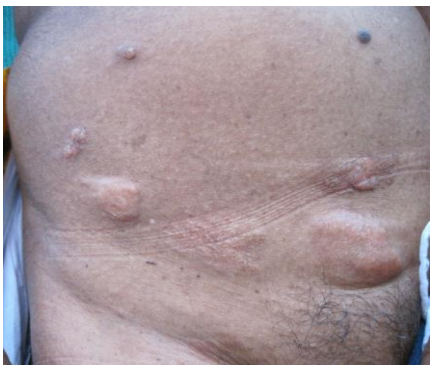


Figure 1: Xanthomatous lesions of primary localized cutaneous amyloidosis.

The patent was evaluated with the differential diagnoses of xanthoma, histiocytosis and sarcoidosis. Complete hemogram, urine analysis, random blood sugar estimation, liver and renal function tests, serum calcium, electrolytes and fasting lipid profile were within normal limits.Skin biopsy showed nodular deposits of amorphous eosinophilic material in the dermis [Figure 2a] which showed congo red positivity [Figure 2b].

Further evaluation including serum electrophoresis, chest radiography, electrocardiogram, echocardiography and ultrasound examination of the abdomen and pelvis ruled out any systemic involvement. Thus we arrived at the final diagnosis of xanthomatous type of primary localized cutaneous amyloidosis (PLCA). The patient is under follow up. She has not developed any more skin lesions or systemic involvement.

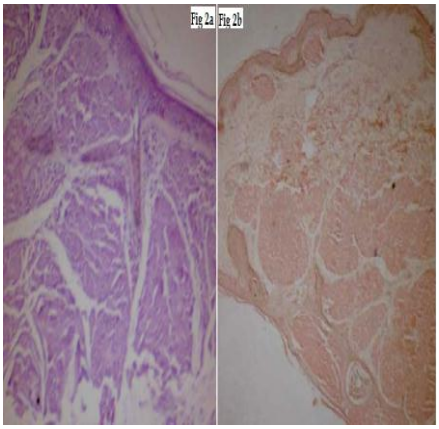


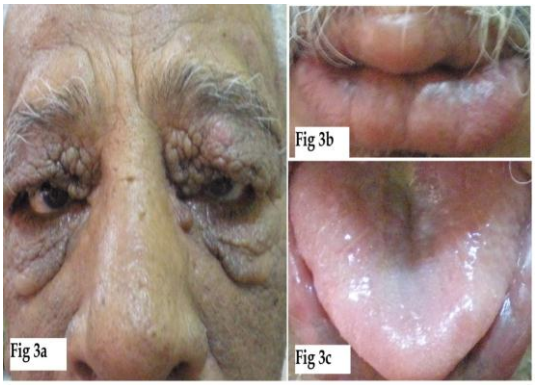
Figure 2a: Skin biopsy showing nodular deposits of amorphous eosinophilic material in the dermis in cutaneous amyloidosis (H and E, X 40) .

Figure 2b: Skin biopsy showing congo red positivity in cutaneous amyloidosis.(Congo red, X100)

Case Report 2

A 61 year old man presented with raised lesions around both eyes of two years duration.He also had swelling of lips of one year along with persistent pedal edema of six months.

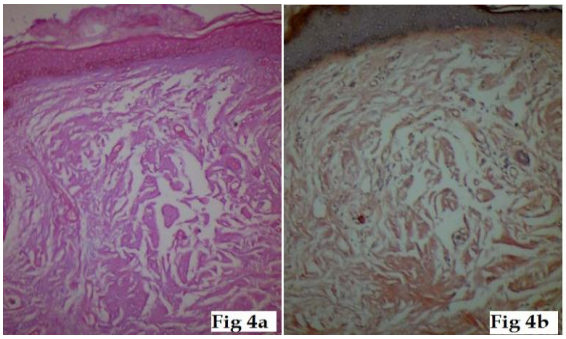
In addition to severe pallor and bilateral pitting pedal edema the patient had multiple skin coloured to hyperpigmented discrete and confluent waxy papules distributed over both upper & lower eyelids bilaterally [Figure 3a] , swollen lips [Figure 3b] and macroglossia [Figure 3c].



Figures 3a, 3b & 3c: Clinical manifestations of systemic amyloidosis (3a: Skin coloured to hyperpigmented papules; 3b: Swollen lip; 3c: Macroglossia)

The differential diagnoses of amyloidosis and sarcoidosis were considered. Initial evaluation revealed anemia, raised erythrocyte sedimentation rate, elevated blood urea and serum creatinine and low serum albumin and total protein values. Ultrasonogram of kidney and urinary bladder demonstrated bilateral renal parenchymal disease suggestive of renal amyloidosis. A tissue diagnosis could not be obtained as the patient was not willing for a renal biopsy.

Hematoxyline and eosin stained sections from the eyelids and lips showed that the entire dermis was filled with amorphous eosinophilic material [Figure 4a] with congo red positivity [Figure 4b], thus confirming the diagnosis of amyloidois. No evidence of plasma cell dyscrasia or organ involvement was obtained despite thorough investigations.



Figures 4a& 4b: Skin biopsy in systemic amyloidosis: (4a:Amorphous eosinophilic material in the dermis [H and E, X4]; 4b: Congo red positivity [Congo red, X100]).

The presence of macroglossia, anemia, pedal edema, impaired renal functionand sonological evidence of renal parenchymal disease were indicative of systemic involvement. The patient was treated with diuretics and iron and vitamin supplements.Though he was advised to be under regular follow up, he did not turn up for the review visit.

DISCUSSION

Amyloidosis has a wide range of clinical presentations from the localized variant to severe forms with multi system involvement. Amyloidosis can be primary or secondary depending on the presence or absence of an underlying disease. When amyloid gets deposited in previously apparently normal skin with sparing of other organs it is categorized as PLCA. The classic lesions described are papular or lichen, macular, maculopapular, nodular or tumefactive and familial (dyschromic) forms.[1,2] Xanthomatous lesions as observed in our first case has only rarely been reported.[3]

Secondary localized cutaneous amyloidosis has been described, in association with a variety of conditions like seborrhoeic keratosis, Bowen's disease and basal cell carcinoma.[4]

Systemic amyloidosis include those associated with plasma cell dyscrasia, amyloidosis secondary to a variety of chronic diseases and the heredofamilial amyloidosis.[5]

Secondary amyloidosis is usually precipitated by chronic suppurative diseases like tuberculosis, rheumatoid arthritis, ulcerative colitis, leprosy, Hodgkin's disease, leukemia and spinal cord injuries. Cutaneous lesions are rare in secondary amyloidosis. The commonly affected organs include liver, spleen, adrenals and kidneys.

Secondary amyloidosis has become a rare disease with better treatment options for most of the pre-disposing conditions.[6]

In systemic amyloidosis, the initial symptoms are often nonspecific like fatigue and dyspnoea. Hence the diagnosis may be delayed. Commonly involved organ is kidney (affecting two thirds of patients at presentation) as in our second patient. Renal manifestations include heavy proteinuria with nephrotic syndrome and impaired renal function. Most serious complication is restrictive cardiomyopathy and more than 50% of the affected show cardiac involvement at the time of presentation.[7]

The cutaneous lesions are commonly seen in primary and myeloma associated systemic amyloidosis. They include petechiae, purpura, ecchymoses, waxy, translucent or purpuric papules, nodules, plaques and tumefactive lesions. Uncommon presentations include pigmentary changes,bullous lesions and scleroderma-like infiltration.[1,2,8] Hyperpigmented and skin coloured papules as seen in our second case are not encountered usually. The management varies from local excision in the localized variant to chemotherapy in those with plasma cell dyscrasias. An alkylating agent with high-dose dexamethasone is the current standard chemotherapy. Calcium channel blockers, β-blockers and angiotensin converting enzyme inhibitors are not useful in patients with amyloid heart disease and are better managed with diuretics. Amiodarone and pace maker implantation are tried in the presence of rhythm or conduction abnormalities. Heart and kidney transplantation may be lifesaving in patients with severe organ damage.[7]Risk of developing systemic amyloidosis in PLCA vary from 7-50% and the recurrence rate reported after initial removal of PLCA is about 9%.[9]

The cutaneous lesions seen in our patients are not commonly encountered in amyloidosis and are rather unusual. One should be aware of these rare presentations not only to make a diagnosis but also to rule out associated systemic involvement as cutaneous lesions may be the initial manifestation in many cases of systemic amyloidosis.

REFERENCES

1. Breathnach S M. Amyloid and Amyloidosis. J Am Acad Dermatol. 1988; 18: 1–16.
2. Wong C K, Breathnach SM. Cutaneous Amyloidosis. Clin Dermatol. 1990; 8(2): 108–111.
3. Bridoux F. Localized amyloidosis: Clinical features and outcome in 203cases. Paper presented at the X International Symposium on Amyloid and Amyloidosis, Tours, France, 2004. Abstract No. O50.
4. Brownstein M H, Helwig EB. The cutaneous amyloidoses. Localized forms. Arch Dermatol. 1970; 102(1): 8–19.
5. Breathnach SM. Metabolic and Nutritional Disorders. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's Textbook of Dermatology. 7 th ed. Oxford: Blackwell publishing; 2004; p: 57.36-57.51.
6. Milliken JA. Primary systemic amyloidosis. Canad Med Assoc J 1955; 73: 458- 62.
7. Desport E, Bridoux F, Sirac C, Delbes S, Bender S, Fernandes B, et al. AL Amyloidosis Orphanet J Rare Dis 2012; 7: 54.
8. Kyle RA, Gertz MA. Primary systemic amyloidosis: clinical and laboratory features in 474 cases. Semin Hematol 1995; 32: 45–59.
9. Kaltoft B, Schmidt G, Lauritzen AF, Gimsing P. Primary localized cutaneous amyloidosis- systematic review. Dan Med J 2013; 60: A4727.