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NECROBIOTIC XANTHOGRANULOMA WITH PARAPROTEINAEMIA

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Necrobiotic xanthogranuloma is a subset of inflammatory form of normolipaemic xanthomas. Because of its characteristic clinical and histopathological findings necrobiotic xanthogranuloma may be regarded as a specific marker of paraproteinaemia.

Key Words : Necrobiotic xanthogranuloma, Paraproteinaemia

Introduction

Necrobiotic xanthogranuloma with paraproteinaemia was described as a separate entity by Kossard and Winkelmann in 1980.[1] The disease is characterised by multiple yellow plaque-like lesions and violaceous to brown nodules, often in the periorbital distribution.[2] On the trunk and limbs, subcutaneous nodules and xanthomatous plaques are present with atrophy and ulceration.[3] The majority of cases have an associated paraprotein, ususally in IgG K or L monoclonal protein.[3]

There are not more than 50 cases reported in world literature. To our knowledge, this is the first case report of necrobiotic xanthogranuloma with paraproteinaemia from India.

Case Report

A 56-year-old female was referred for evaluation of brownish plaques of face. The lesions started one year ago over the periorbital area. It gradually increased in size to involve adjacent areas and newer lesions appeared near the earlier ones. Simultaneously similar lesions appeared over the upper extremities. Along with these patient noticed easy fatiguability.

Three months ago patient noticed pain in the back which was gradually increasing in severity and had difficulty in walking. There were no constitutional features.

Examination showed a moderately built female with marked pallor. There was no evidence of bleeding into skin, no jaundice, no generalised lymphadenopathy.

Dermatological examination showed multiple yellowish red firm plaques and nodules of varying sizes periorbitally and over the upper extremities. The size varied from 2 to 6 cm. Some of the plaques had sealing and waxy appearance. There was no perilesional erythema. Hair, nails, palms and soles as well as mucous membranes were normal.

Systemic examination revealed diffuse enlargement of liver, which was firm, non-tender, smooth surfaced. There was no bruit over the liver. There was no splenomegaly. The spine had tenderness over L3-4 vertebrae. There was no evidence of spinal cord compression. Other systems were within normal limits.

Haemogram showed a total leucocyte count of 11,200 cells/cmm with a differential of P52, L45, E3. Haemoglobin was 5.2 gm/dL. The platelet count was 92,000/cmm. Erythrocyte sedimentation rate was 57mm/hour, blood urea 15 mg/dL, serum creatinine

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0.6 mg/dL, serum protein total was 9.1g/dL and albumin 2.4g/dL. Serum bilirubin (total) was 0.8 mg/dL, and conjugated bilirubin 0.3 mg/dL. Serum alkaline phosphatase was 9 KA units, SGPT 53 IU/L. Lipid profile was normal. Antinuclear antibody was negative. Serum protein electrophoresis showed myeloma band. Urine examination showed the presence of Bence Jones proteins.

Peripheral smear examination showed normocytic hypochromic blood picture with plasma cytoid lymphocytes. Bone marrow showed an increase in plasma cells with binucleated and multinucleated immature forms. Ultrasonogram of abdomen showed hyperechoic kidneys studded with multiple cysts. Other viscerae were normal.

Skiagram of skull and pelvis showed vague lytic areas in parietal bone, femur and left ileum.

The biopsy sections from the skin lesion showed atrophic epidermis (Fig.1). There was a clear Grenz zone immediately below the

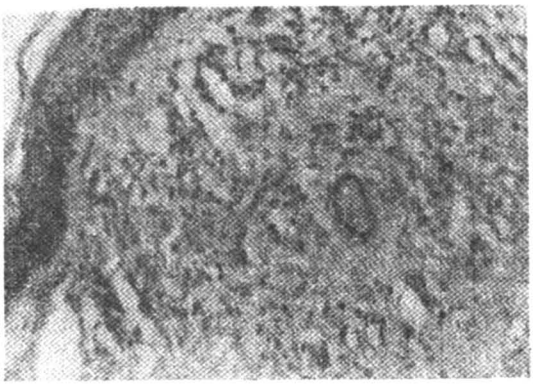

Fig. 1. Atrophic epidermis, grenz zone, cholesterol clefts, foreign body giant cell, tuton giant and necrobiosis (H & Ex250).

epidermis. The dermis .showed xanthogranulomatous reaction with foamy histiocytes and many Tuton giant cells and a few foreign body type of giant cells. Deeper dermis showed focal areas of necrobiosis with cholesterol clefts. The intervening area showed hyalinised fibrocollagenous tissue with lymphoplasmacytic infiltrate.

Discussion

The term necrobiotic xanthogranuloma with paraproteinaemia was first used by Kossard and Winkelmann in 1980 to describle 8 patients who had cutaneous lesions that showed a destructive histopathologic pattern of inflammatory granuloma with xanthomatosis and panniculitis in association with paraproteinaemia.[4] Since then several cases had been reported from various parts of the world. But till today no such case was reported from India.

Necrobiotic xanthogranuloma is a subset of inflammatory form of normolipaemic xanthomas. It seems to have no sex predilection.[5] The age of onset ranged from 17 to 85 years.[5] The most frequent skin lesion was an indurated papule, nodule or plaque.The colour varied from violaceous to red-orange, often with yellowish hue.[4] The periorbital region was the most frequent site of involvement followed in frequency by the trunk, face and extremities.[4,5] Ophthalmic features of necrobiotic xanthogranuloma included eyelid lesions, orbital masses, conjunctival involvement, keratitis and scleritis, episcleritis or anterior uveitis.[5]

Other systemic findings include hepatosplenomegaly, arthralgia/arthritis, hypertension, generalised sensorineural polyneuropathy, cardiomyopathy and pulmonary fibrosis. There is characteristic absence of generalised lymphadenopathy.

The histologic criteria by which the diagnosis of necrobiotic xanthogranuloma may be made are as follows: 1) granulomatous dermal or subcutaneous

inflammatory infiltration consisting primarily of histiocytes, foam cells and giant cells; 2) giant cells of Touton type as well as foreign body type; 3) frequent xanthomatisation of histiocytes and giant cells; 4) variable presence of cholesterol clefts, foci of plasma cells and lymphoid nodules scattered within the granulomatous infiltrate. The presence of Grenz zone, epidermal atrophy and panniculitis are other occasional findings in histology.

Because of its characteristic clinical and histologic findings, necrobiotic xanthogranuloma may be regarded as a specific marker of paraproteinaemia.[4] The histologic findings, paraproteinaemia and other laboratory data help to confirm the diagnosis. The paraprotein may develop later or it may preceede the skin lesions by some years.[5] The process appears to involve principally skin and reticuloendothelial system.[5]

The prognosis of patient with necrobiotic xanthogranuloma is difficult to assess. Low dose alkylating agents such as melphalan seem to be of value on the skin lesion in these patients. Eventhough chemotherapy is most beneficial, for unifocal lesions some people advocate X-ray treatment.[4]

In our patient the skin lesions are typical and in accordance with most of the previously described pattern. There is absence of ophthalmic lesion in the present patient. Ophthalmic lesions may develop, if the process is left untreated for some more time. The patient is being treated with prednisolone, cyclophosphamide and vincristine cyclically and she is responding very well to this regimen.

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