

A Case of Multiple Leg Ulcers

Dear Editor.- Granulomatosis with polyangitis (GPA) is a necrotizing granulomatous inflammation usually involving upper and lower respiratory tract and affecting predominantly small to medium sized vessels.

GPA was first clearly delineated by Friedrich Wegener a German pathologist in 1937. The name Wegeners granulomatosis was changed to GPA following the International consensus 2013. The disease has an incidence of 3-10 /million/year. The exact mechanism of production of vascular inflammation and granulomas is not known , but ANCA has a prime role in pathogenesis.

The European vasculitis society classified a localized variety where upper and /or lower respiratory system is involved without any systemic involvement [1] Likewise localized variety can be restricted to skin. Cutaneous manifestation can be the initial presentation in 13 % 1. Most common being palpable purpura followed by digital infarcts, tender subcutaneous nodules with/ without ulceration and pyoderma gangrenosum like lesions. Certain percentage of patients with mere LCV and negative c ANCA have a risk of developing GPA 2. Patients with LCV has onset of disease at an earlier age and more rapidly progressive and widespread disease. Skin lesions can occur 1- 7 years before seroconversion occurred and 1 year before systemic disease [2].

A 45 year old female presented with 3 year history of recurrent episodes of red raised lesions and nodules breaking down into painful ulcers over both legs .She was on multimodalities of treatment including oral steroids. She had no other systemic symptoms and was not on any regular medications.

On physical examination, the patient was found to have multiple ulcers over anterolateral aspect of both lower legs, 6 in number, round to oval in shape, size of which ranging from 1-3 cm, with inflamed edges and floor covered with slough and crust (**Figure 1**). There was edema of bilateral lower limbs and lesions with necrotic centre, atrophic scars and palpable purpura.

Hemogram, liver and renal function tests, urine analysis, serology, chest X ray were found to be within normal limits. USG abdomen showed fatty liver and small uterine fibroids. Skin biopsies were taken from the ulcers which showed the following histopathological features. Epidermal findings were unremarkable. Dermis showed features of

1. Vasculitis : The medium and small vessel walls show fibrinoid necrosis , leucocytoclasia, RBC extravasation and neutrophilic infiltration of vessel walls (**Figure 2 a**).
2. Panniculitis: Both septal and minimal lobular infiltration seen (**Figure 2 b**).
3. Granulomas : Poorly defined granulomas composed of epithelioid histiocytes and lymphocytes were seen.



Figure 1. Multiple ulcers covered with slough and crust on lateral aspect of leg and foot

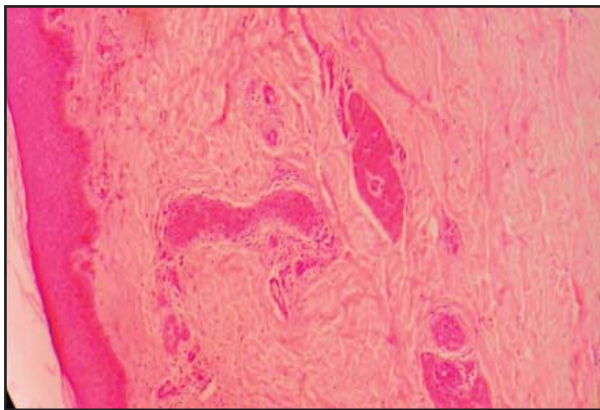


Figure 2 a. Medium vessel walls with fibrinoid necrosis, leucocytoclasia and neutrophil infiltration. Low magnification (x 10, H and E)

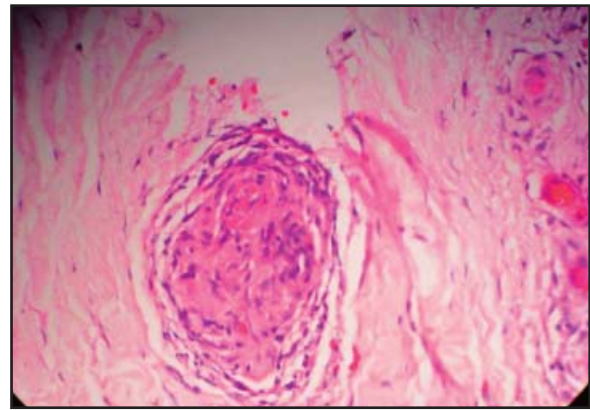


Figure 2 b. Poorly defined granulomas composed of epithelioid histiocytes and lymphocytes. High magnification (x 40, H and E)

Direct immunofluorescence showed features suggestive of vasculitis.

Histological features consisting of vasculitis with granulomas are present in conditions like infections, Churg Strauss syndrome, cutaneous polyarteritis nodosa, connective tissue diseases. With the clinical picture of vasculitic ulcers and the above mentioned histological features, diagnosis was reached by considering and ruling out other conditions. The complete picture of necrotizing vasculitis with granulomatosis is seen in skin biopsy in 25-50% cases of GPA [3].

10-25% patients with active systemic disease and 40% with limited disease can be cANCA negative. Sensitivity of ANCA is related to the extent, severity, activity of disease at time of testing and was found to be 67% by immunofluorescence and 60% by ELISA even in active local or regional symptomatology [4]. Initial evaluation should establish the extent of organ involvement as recent evidences support distinct approaches for localised and generalised lesions. The treatment options include methotrexate in conjunction with oral prednisolone for localized disease [5]. In non-localised disease, cyclophosphamide forms the mainstay of treatment [6].

We report this case to emphasise that GPA is a clinicopathological diagnosis with pathological hallmark being coexistence of vasculitis and granulomas.

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