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Case Report

Pyoderma Gangrensum – a complication of breast biopsy

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CASE REPORT A sixty-three year old woman underwent a frank needle biopsy to explore a previously diagnosed mammographic abnormality. Subsequent histology of the specimen proved to be benign. Initially healing occurred without incident.

Three months later the site of the biopsy, and the surrounding skin, became erythematous and dehised. Wound swabs at this stage showed no bacterial growth. The wound subsequently showed little tendency towards healing, and eight months following the biopsy, a breast sinus was apparent. This was laid open, and a "pus-like" fluid expressed. Delayed primary suturing of the wound was carried out two weeks later. The wound failed to heal and sinus formation deep to the nipple was apparent.

Sixteen months after the initial biopsy, a wedge resection of the right breast (including the nipple) was undertaken, after referral to the Regional Plastic Surgery unit. Histology revealed acute-on- chronic inflammation, with the presence of scattered foreign-body giant cells. Again the wounds failed to heal, and a persistent flat granulating ulcer developed, which showed no inclination towards healing. (Fig 1 & 2).

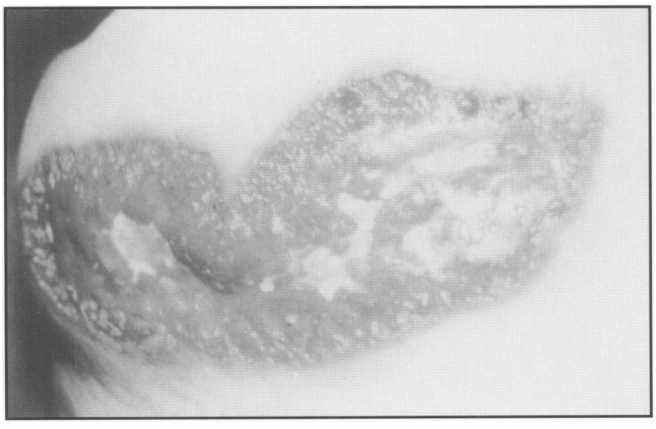

Fig 1. Initial appearance of flat granulating persistant ulcer with areas of slough.

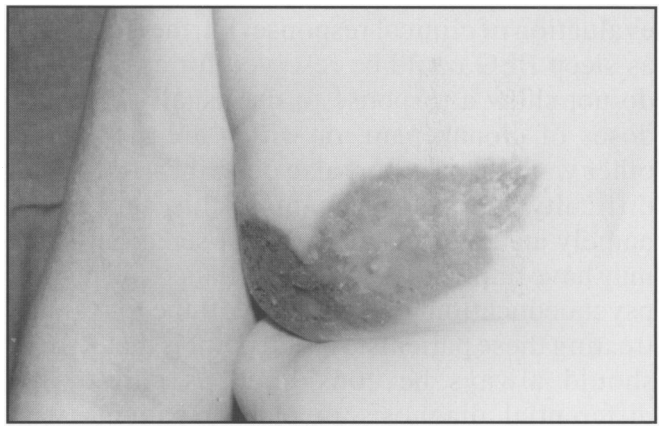

Fig 2. The lesion at commencement of treatment.

A Bacteriological consultation suggested the diagnosis of a Meleneys post operative synergistic gangrene, though this failed to be confirmed by either blood cultures or bacteriological swabs. Prior to further surgery, a dermatological consultation based on the clinical appearance, suggested the diagnosis of Pyoderma Gangrenosum. Investigations were undertaken to exclude secondary causes. Thorough clinical examination, inflammatory markers and colonoscopy proved negative for inflammatory bowel disease. A full blood profile, rheumatoid factor, inimunoglobulins and liver function tests also failed to demonstrate a secondary cause.

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Further bacteriological swabs similarly failed to show any growth. Treatment with systemic corticosteroids and topical medication were commenced and within days the wound began to show signs of healing, both from the wound edge, and surprisingly from its base (Fig 3).

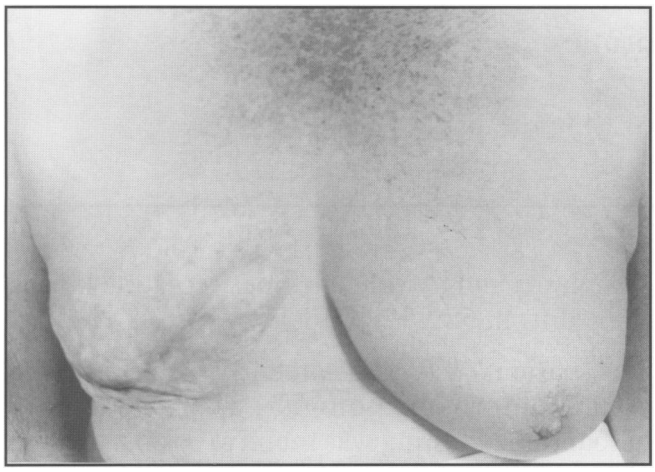

Fig 3. Healing of the lesion fourteen days following corticosteroid treatment.

DISCUSSION

Pyoderma Gangrenosum is a rare, destructive non-infective ulceration of the skin. The condition was first described by Brunsting in 1930.[1] It usually presents as innocuous, erythematous, tender lesions, which break down to form an ulcerated area with a necrotic base and undermined violaceous border. The lesions may be single or multiple and remain quiescent or rapidly progress with marked tissue destruction.

As a result of its benign initial appearance and infrequent involvement of surgical sites, Pyoderma Gangrenosum is often mistaken for resistant infection and inappropriately managed. Many patients undergo either prolonged courses of antibiotics or surgical debridement, leading to even further extension of the disease.[2,3] The lack of pathognomonic histological features makes the diagnosis very difficult for the pathologist if it is not suggested as a differential diagnosis.

The true aetiology of Pyoderma Gangrenosum remains unclear but it is felt that an altered immune system may play a part.[4] Approximately 50% of the cases are idiopathic but the remainder are associated with systemic illness, the most common being inflammatory bowel disease. Other associations include regional enteritis, Crohns disease, arthritis – both rheumatoid and seronegative and haernopoietic neoplasms.[4] Less common associations are osteoarthritis, psoriatic arthritis, chronic active hepatitis, primary biliary cirrhosis, myeloma, systemic lupus erythematosis, hypogammaglobulinaemia and paraproteinaemia (especially IgA).

The recognised treatment of Pyoderma Gangrenosum is immunosuppression with corticosteroids and topical medication. Hyperbaric oxygen is also claimed to be effective in a small number of patients.[9] Other drugs which show benefit, include cyclosporin, dapsone, cyclophosphamide and azathioprine. Though it is important to stress the difficulty in obtaining healing with this condition.

Evidence of this condition occurring in surgical sites has previously been reported,[6,7,8] with reduction mammoplasty, not infrequently cited, though rarely has it been documented following a needle biopsy. This case illustrates that Pyoderma Gangrenosum should always be considered in the differential diagnosis of idiopathic skin ulceration which fails to respond to conventional treatment.

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