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Histological Insight in A Case of Neutrophilic Lobular Panniculitis: Brief Case Review

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ABSTRACT

Neutrophilic lobular panniculitis is a very rare condition belonging to the group of neutrophilic dermatoses. NP appears as a subcutaneous nodular eruption. Histologically they are characterized by lobular neutrophilic infiltrate. NP must be differentiated from other types of panniculitis, and also from the subcutaneous septal involvement that may occur in some cases of Sweet's syndrome and from erythema nodosum. Here we intend to show the histological perspective in a case of neutrophilic lobular panniculitis along with its differentiation from other panniculitis.

KEYWORDS : Neutrophilic lobular panniculitis, Rheumatoid arthritis, Histopathology

Introduction

Neutrophilic Dermatoses are non-infective dermatoses that exhibit a predominantly neutrophilic inflammatory infiltrate and promptly respond to corticosteroid therapy. Largely, dermatoses with associated vasculitis are not included in this spectrum though some researchers include these too under this broad entity. As histopathology plays a pivotal role in the classification of this group of diseases, which are diverse in their etiology, neutrophilic dermatosis is a histopathological rather than a clinical entity.

Case report

A 37 yr male came with complains of multiple small reddish nodules associated with slight pain on both upper and lower limbs for 5 months along with multiple joint pains. On examination, small reddish erythematous nodules roughly measuring 2.5x2.0x2.0cm^3 were present mostly on extensor aspect of both upper and lower limbs. Rheumatoid Factor and anti-CCP was positive in the patient.Complete blood count and routine examination of urine were normal. Excision of the lesion was done and tissue sent for histopathological examination. H&E sections of the tissue showed lobular infiltrate in low power(Fig.1) of inflammatory cells predominantly neutrophils in the subcutaneous fat. (Fig.2).

Figures

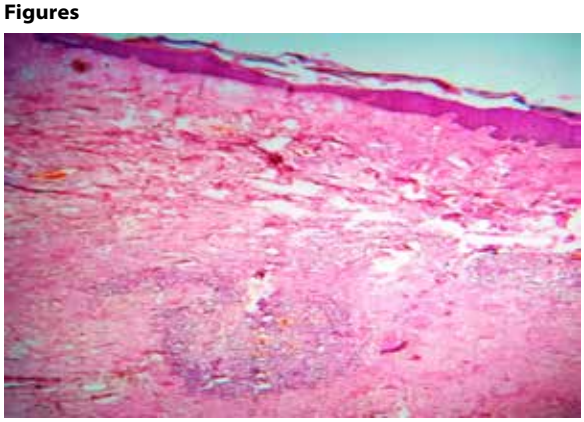

Fig.1-Section shows lobular infiltrate (arrow) in subcutis in low power(H&E x5)

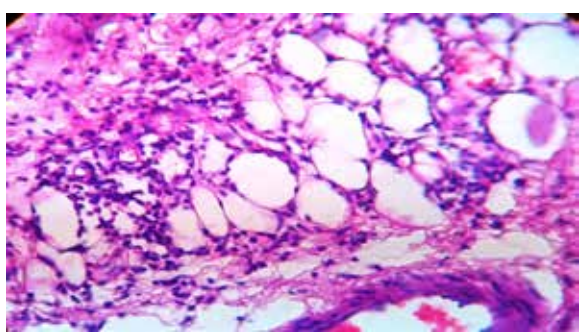

Fig.2-Higher magnification shows predominant neutrophilic infiltrate admixed with some lymphocytes and plasma cells(H&E x40)

Discussion

The term 'neutrophilic dermatosis' (ND) was initially used by R. D. Sweet in 1964 as 'acute febrile neutrophilic dermatosis' to describe Sweet's syndrome[1]. Neutrophilic lobular panniculitis (NLP) was first described in 1988 by Newton & Wojnarowska[2] in a patient with rheumatoid arthritis. Since then[1,3,4,5] very few cases have been reported so far largely because of lack of proper understanding, close differential diagnosis and benign nature of the disease. Neutrophilic dermatoses are inflammatory dermatoses characterized histologically by a predominantly neutrophilic infiltrate in the absence of any infective pathology[6,7] characterized by dense infiltrate of neutrophils mixed with eosinophils, plasma cells and lymphocytes spanning the entire dermis and may extend into subcutis. Our case showed lobular infiltrate of inflammatory cells predominantly neutrophils in the subcutaneous fat in low power. These features are reminiscent of Sweet's syndrome except for the absence of dermal edema and presence of a mixed inflammatory infiltrate. Probably, the condition described as 'neutrophilic lobular panniculitis associated with rheumatoid arthritis' and which Requena et al have reclassified as lobular neutrophilic panniculitis is nothing but an extension of this process itself[8]. NLP should be differentiated from the suppurative variant of erythema nodosum in which numerous neutrophils extend into the lobule from fibrous septa. Thus,identification of the associated epidermal or dermal patterns helps in differentiating each of these conditions from one another. NP is significantly associated with myelodysplasia. It is highly sensitive to oral steroid therapy.

Conclusion

Presence of neutrophilic lobular panniculitis must warrant the possi-

bility of Rheumatoid Arthritis in a patient. Hence its identification in histology is very important to aid in the diagnosis of the patient.

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