

## CASE REPORTS

### PLAQUE TYPE ERYTHEMA NODOSUM

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Three young females developed plaque type erythema nodosum. The underlying causes in them were tuberculosis chest, recurrent furunculosis and malaria respectively. All the three cases were under treatment at the time of development of erythema nodosum plaques and the onset was acute.

**Key words :** Erythema nodosum, Plaque type.

Erythema nodosum can occur in an acute or a chronic form which differ only in the clinical manifestations, the histopathological characteristics being similar in both the forms.<sup>1</sup> Rarely, two or three large nodules of acute erythema nodosum merge to form a crescentic ring which spreads for some days before fading.<sup>2</sup> Chronic erythema nodosum or erythema nodosum migrans was first described by Bafverstedt in 1954.<sup>3</sup> In this form, the persistent nodules on one or both legs change their configuration in a migratory manner, becoming crescentic or sickle-shaped over a period of a few weeks to some months. In three of our cases, plaques developed within two to four days on the extensor surfaces of forearms, legs and face, due to rapid peripheral extension of the nodules. Such cases of erythema nodosum with an acute onset and rapid evolution of nodules into plaques have not been described earlier.

#### Case Reports

##### Case 1

A 30-year-old female had tuberculosis of the chest and was taking regular treatment for the last three months. Ten days back, she



Fig. 1. Plaques of erythema nodosum on the extensor surfaces of forearms.

developed erythematous to violaceous nodules on the extensor surfaces of her forearms and two days later on the legs. Nodules turned into plaques after two to three days by peripheral extension. Examination revealed bilateral symmetrical plaques 4 to 5 cm in diameter, mainly on the extensor surfaces of forearms (Fig. 1) and a few on the legs. The margin of the plaques were raised as a 1 cm wide oedematous erythematous rim with a few papules. The centres of the plaques were violaceous, scaly and slightly depressed. Erythema disappeared on the 15th day, and the scales and oedema of the rim on the 20th day. Slight atrophy and violaceous discoloration persisted for five to six weeks. New plaques appeared as old lesions healed. Her haemoglobin was 6.5 gm%, TLC 16000/cmm,

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DLC P65, L27, M6, E2, and urine and stools were normal. ESR was 30 mm. X-ray chest showed bilateral tuberculosis of the lungs with collapse of the left lung. Biopsy of the skin revealed a lymphohistiocytic infiltrate in relation to the hair follicles and blood vessels. Fat cells septae showed thickening and infiltration by cells. Vasculitis and cellular infiltration of the septal vessels were seen and thus the changes were consistent with erythema nodosum.

### Case 2

A 29-year-old female had recurrent furunculosis for the last four months and was taking treatment. Four days back, she developed dusky violaceous nodules on her left forearm which turned into plaques in two to three days. She developed similar new plaques on the left side of face and both forearms. Examination revealed 3 to 5 cm diameter violaceous plaques with an erythematous, oedematous, 0.5 cm wide raised rim. Plaques were bilateral, asymmetrical, slightly tender and had fine scales at their centres. After 9 to 10 days, the plaques regressed as erythema, scales and oedema from the margin disappeared, and the violet colour deepened. After 20 days, slight atrophy with discoloration persisted. Complete resolution occurred after five weeks but new plaques appeared simultaneously. Routine investigations of blood, urine and stools were normal. ESR was 18 mm. Biopsy report was consistent with erythema nodosum.

### Case 3

A 25-year-old female had malaria six days back and was given treatment. Four days back, she developed violaceous nodules on the extensor surfaces of forearms, legs and face. Nodules rapidly turned into plaques within 2-3 days. Examination revealed bilateral, symmetrical, 3 to 5 cm diameter, slightly tender, violaceous plaques with raised red margins and violaceous centres covered with fine scales.

Routine investigations of blood, urine and stools were normal. ESR was 24 mm. Biopsy report was consistent with erythema nodosum.

### Comments

Typical or acute erythema nodosum is characterised by an acute eruption of tender erythematous nodules over the shins, knees, ankles, thighs, extensor aspect of forearms, the face and neck. Nodules may be ushered in with fever, arthritis, malaise and colour changes as in a bruise. Nodules involute in three to six weeks but recurrences are common.

Robert et al<sup>4</sup> reported that chronic erythema nodosum was the same entity as erythema nodosum migrans, subacute nodular migratory panniculitis, nodular vasculitis and probably erythema induratum. Our cases were different from the above conditions as the nodules developed into plaques rapidly, the main lesions were on the forearms and colour changes of bruise were seen. Biopsies showed lymphohistiocytic infiltrate around hair follicles, blood vessels and sweat glands,<sup>5</sup> and this was seen in all the three cases in addition to typical histopathological and clinical changes of erythema nodosum. Plaques with acute onset represent a clinical variant of erythema nodosum.

### References

1. Lever WF and Lever GS: Inflammatory disease of the subcutaneous fat, in: *Histopathology of Skin*, Sixth ed, JB Lippincott Co, Philadelphia, 1983; p 246.
2. Rook A, Wilkinson DS and Ebling FJG: *Cutaneous vasculitis*, in: *Textbook of Dermatology*. Third ed, Blackwell Scientific Publications, Oxford, 1979; p 1031.
3. Bafverstedt B: Erythema nodosum migrans, *Acta Dermato-Venerol*, 1954; 34: 181-193.
4. Fine RM and Meltzer HD: Chronic erythema nodosum, *Arch Dermatol*, 1969; 100: 33-38.
5. Rook A, Wilkinson DS and Ebling FJG: *Cutaneous vasculitis*, in: *Textbook of Dermatology*, Third ed, Blackwell Scientific Publication, Oxford, 1979; p 1030.