EDİTÖRE MEKTUP LETTER TO THE EDITOR

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A Case of Erythema Annulare Centrifugum Following Wood Injury: Is it the First Report ?

Odun ile Yaralanmayı Takiben Gelişen Bir Eritem Annüler Santrifüj Olgusu: Rapor Edilen İlk Olgu mu?

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Erythema annulare centrifugum (EAC) is a rare condition characterized by annular, polycyclic, erythematous plaques with a trailing scale. The disease has been known to be precipitated by various infections, neoplasia, drugs and other autoimmune conditions.[1] We describe a case of EAC after trauma, an association never before reported in literature.

A 15 year old male presented to us with complaint of a red lesion over the right shin for 3 weeks that was constantly increasing in size. The patient gave history that he sustained injury at the site with a wooden object around 6 weeks back. The wood was implanted in the skin and was removed by an unqualified local practitioner. He was given some topical ointment for application and the wound healed in around 10 days' time. Three weeks back, he noticed red scaly lesion over the site of trauma that started to spread outwards. There was no history of fever, pain, itching or discharge from the site. There was no history of similar lesions elsewhere on the body. The patient was apparently healthy and had not been ill lately. He was not taking any medications. On examination, a large annular plaque of the size of 10 cm diameter was seen on the lower half of the right anterior leg with erythema and slight swelling of the periphery and central clearing. The erythematous plaque was extending distally towards the ankle (Figure 1). The scales over the lesion were trailing behind the advancing edges. Rest of the cutaneous, mucosal and systemic examination was normal. A potassium hydroxide mount from the edge of the lesion was negative. Lab investigations including complete blood counts, liver and renal function tests, urine and stool examination, thyroid function tests were within normal range. Antinuclear antibodies, Rapid plasma reagin test, hepatitis and herpes viral serology, serology for *Borrelia burgdorferi* and HIV screening ELISA were negative. Chest radiograph was normal and Montoux test was negative. Histopathology of the skin from the lesion showed mounds of parakeratosis, spongiosis and dense lymphohistiocytic infiltrate in the upper dermis, particularly in the perivascular location (Figure 2). Based on these features,

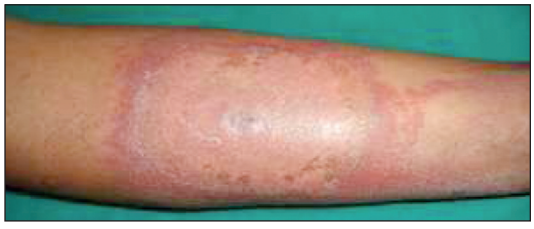

FIGURE 1: A large annular erythematous plaque over the right shin with trailing scale. Note the centre of the plaque shows the site of penetration by woody object.

a diagnosis of erythema annulare cetrifugum was made.

EAC was first described in 1916 by Darier and classification into superficial and deep types was done by Ackerman. The superficial type is characterized by pruritus, scales, non indurated borders and histopathologically by infiltrate in the upper dermis, presence of parakeratosis and eosinophils and absent dermal edema. The deep type is non scaly, non pruritic with indurated borders and inflammatory infiltrate in the deep dermis as well, with no epidermal changes.[2]

EAC is now believed to be a clinical reaction pattern rather than a separate clinicopathological disease entity and mainly includes reaction patterns of tumid lupus erythematosus, spongiotic dermatitis and pseudolymphoma.[3] EAC is a type IV hypersensitivity reaction to different causes and diseases. Inciting factors include infections (viral, bacterial, mycobacterial, spirochaetal, fungal, parasitic), arthropod bites, drugs (chloroquine, nonsteroidal anti-inflammatory agents, finasteride, thiazides, spironolactone, gold, rituximab, ustekinumab), endocrinological diseases (Hashimoto's thyroiditis, Graves disease, autoimmune progesterone dermatitis), connective tissue diseases (Sjögren's syndrome), hematological and neoplastic diseases (lymphomas, leukemias, multiple myeloma, cancers of breast, prostate and ovary) and other miscellaneous diseases.[1,4] Despite extensive investigations, no underlying cause may be identified in a majority of the cases.[5] We excluded all of these conditions in our patient by clinical history, examination and investigations. We could not find EAC occurring at the site of preceding trauma, as was seen in our case.

The differential diagnosis includes other figurate erythemas like erythema chronicum migrans, erythema gyratum repens, erythema marginatum rheumaticum and subacute cutaneous lupus erythematosus, secondary syphilis, granuloma faciale and cutaneous T cell lymphoma. EAC has a good prognosis and the mean time for resolution is around a year.[6] Treatment consists of topical and

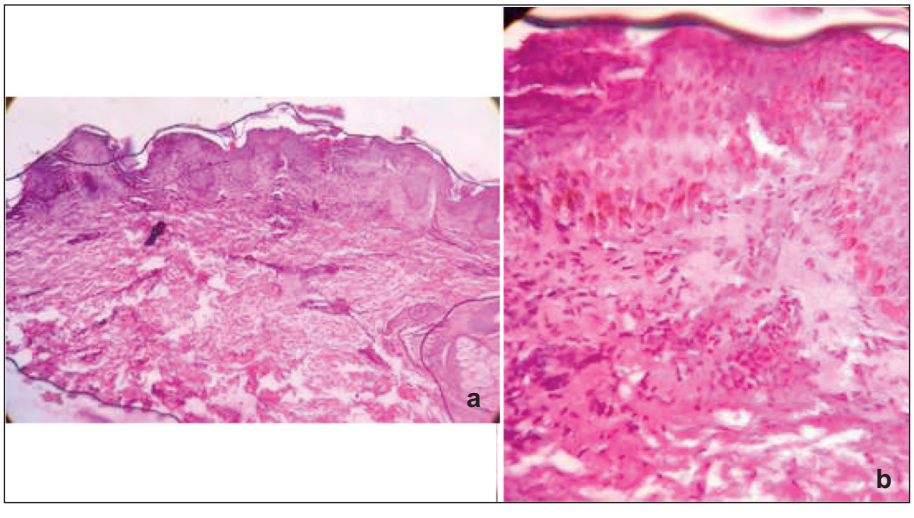

FIGURE 2: Thereare spongiosis, epidermal hyperplasia, papillary dermal edema, lymphohistiocytic infiltrate in the superficial dermis and along blood vessels (**a**, HE,10x; **b**, HE, 40 x).

systemic steroids, topical vitamin D analogues, metronidazole and erythromycin.

We present a rare case of superficial type of erythema annulare centrifugum, possibly induced by trauma.

Conflict of Interest

Authors declared no conflict of interest or financial support

Authorship Contributions

Idea/Concept: *Tasleem Arif;* ***Design:*** *Tasleem Arif, Syed Suhail Amin;* ***Control/Supervision:*** *Tasleem Arif, Syed Suhail Amin;* ***Data collection and/or Processing:*** *Mohammad Adil, Dinesh Raj;* ***Analysis and/or Interpretation:*** *Tasleem Arif, Syed Suhail Amin;* ***Literature Review:*** *Mohammad Adil, Dinesh Raj;* ***Writing The Article:*** *Mohammad Adil, Noora Saeed;* ***Critical Review:*** *Tasleem Arif;* ***References and Fundings:*** *Tasleem Arif, Sayed Suhail Amin;* ***Materials:*** *Tasleem Arif, Noora Saeed.*

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