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A 'target' skin lesion

Case study

A boy, 12 years of age, was being treated for pneumonia. The cold haemagglutination test was positive for *Mycoplasma pneumoniae*. He developed an isolated asymptomatic skin lesion on his lower limb (Figure 1) which disappeared completely after 1 week.

Question 1

What is the diagnosis of this lesion?

Question 2

What is the most likely cause of this lesion?

Question 3

What is the pathogenesis of this lesion?

Question 4

What are the other possible causes?

Question 5

What is the best plan of management?

Figure 1. Skin lesion



Answer 3

Erythema multiforme is a type of delayed hypersensitivity skin reaction triggered by infection or drugs. Histologically it is characterised by perivascular mononuclear cell infiltrate, vacuolisation of the basal cell layer, dermal oedema, and lichenoid interface dermatitis with numerous individually necrotic keratinocytes. The epidermal changes usually occur in the central portion of the target lesion.² There is also subdermal bullae formation.

Answer 4

In more than 50% of cases of erythema multiforme no underlying cause is found. Possible causes are herpes simplex 1 and 2, adenovirus, measles, mycobacterium, and yersinia and treponema pallidum. Drugs such as penicillin, cephalosporin, tetracycline, and antituberculosis treatment have been associated with erythematous multiforme.² Less common causes of erythema multiform in adults include malignancy and collagen vascular disease.

Answer 5

Erythema multiforme has low morbidity and is usually self limiting.³ Management includes treating the underlying infection or immediate withdrawal of the causative drug. Oral acyclovir has been shown to be effective in erythema multiforme caused by herpes simplex virus and in suppression of recurrent erythema multiforme.⁴

Conflict of interest: none declared.

References

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Figure 2. Central bullae or vesicle formation with surrounding concentric rash



Answer 1

Erythema multiforme. The morphology of the lesion is classic of erythema multiforme; a rash with central dusky or violaceous appearance and peripheral erythematous rash. The central bullae or vesicle formation with surrounding concentric rash gives the appearance of a 'target lesion' (Figure 2).

Previously erythema multiforme, Stevens-Johnson syndrome and toxic epidermal necrolysis were considered one disease presenting with various clinical spectrums in which erythema multiforme is the mildest, and Stevens-Johnson syndrome the most severe with mucous membrane destruction. In 1993, a new clinical classification redefined erythema multiforme as a separate entity with minimal mucous membrane involvement and less than 10% epidermal detachment.¹

Answer 2

Mycoplasma pneumoniae, a well known cause of erythema multiforme.

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