

QUIZ SECTION

Butterfly Rash in a Young Boy: A Quiz

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An 11-year-old boy presented in February 2008 with a facial butterfly rash that persisted for at least one month. Lupus erythematosus was repeatedly suspected and the boy was referred for further examinations. A detailed medical history did not reveal any arthralgia, fever, malaise, exanthema, intense exposure to ultraviolet (UV) light in the period one to three weeks before onset of the rash.

Physical examination revealed sharply demarcated homogenous erythema on the cheeks, forehead and nose (Fig. 1a) without scaling, but with considerable accentuation of the outer rim (Fig. 1b).

Laboratory tests, including complete blood count, rheumatoid factor, antinuclear antibody (ANA) screening, creatinine kinase, erythrocyte sedimentation rate and C-reactive protein (CRP), remained negative. Cefuroxime 125 mg twice a day over 10 days led to complete remission without further symptoms.

What is your diagnosis? See next page for answer.



Fig. 1. Examination revealed (a) sharply demarcated erythema on the cheeks, forehead and nose, with (b) considerable accentuation of the outer rim.

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ANSWERS TO QUIZ

Butterfly Rash in a Young Boy: Comment

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Diagnosis: **Erythema migrans**

Serological examinations detected IgM antibodies against *Borrelia burgdorferi sensu lato*, confirming the diagnosis of erythema migrans. As erythema migrans already persisted for >1 month, IgG antibodies against *Borrelia burgdorferi sensu lato* were also detectable.

In children a variety of diseases may lead to a butterfly rash. The incidence of systemic lupus erythematosus (SLE) in children ranges from 10–20 per 100,000. Approximately one- to two-thirds of patients with SLE present with malar erythema (1), usually lasting from a few days to a maximum of 2 weeks (2). Importantly, a butterfly rash in SLE is associated with concomitant fatigue, arthralgias/arthritis, disseminated exanthema and further symptoms, as summarized in the revised ACR criteria (3).

So-called “slapped cheek” may occur after sunburn, in viral exanthemas such as measles, rubella, roseola infantum (exanthema subitum) and following bacterial infections, e.g. erysipelas or scarlet fever (4). However, these facial erythemas are mostly self-limiting and short lasting.

In contrast, erythema infectiosum may cause long-lasting “slapped cheek” in children between the ages of 4 and 15 years, often leading to arthralgias and flu-like symptoms and even titres of ANA (5).

Less frequent causes of a malar rash that tend preferably to affect adults include acne, rosacea, seborrhoeic dermatitis, photoallergic contact dermatitis, dermatophyte

infection, polymorphous light eruption, dermatomyositis and pemphigus erythematosus (6).

The most likely diagnosis of a long-lasting facial erythema in a child without further symptoms is borrelial infection. In an endemic region of Germany the incidence rate of borrelial infections in children aged 5–15 years was 140 per 100,000 (1, 7). In children, erythema migrans is the most common clinical presentation of borrelial infection, and in contrast to adult patients it often affects the head and neck (8).

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