

Uncommon Localization of Erysipelas in an Immunocompetent Patient: Erysipelas of the Scalp

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Abstract

Erysipelas is an infectious disease characterized by acute inflammation of the skin and subcutaneous tissue, commonly occurring in the elderly and immunocompromised patients. It is mostly caused by exotoxins released by β -hemolytic streptococci group A, although the causative bacteria is rarely isolated in patients. It affects commonly the legs and the face, and presents clinically as a well-demarcated, erythematous, indurated, rapidly spreading patch with a palpable advancing border with rapid, irregular and lateral spread over a few days. Associated symptoms may include nausea, pain, fever and chills. The diagnosis is usually clinical; however, further investigations may be used to eliminate differential diagnosis in unusual cases. Additionally, the specific management depends upon the location, the severity of the infection and patient comorbidities. Nevertheless, the mainstays of the treatment are systemic antibiotics, especially penicillin. We report a case of an exceptional localization of erysipelas on the scalp in a patient with bilateral retroauricular intertrigo on acne keloids scars.

Keywords: Erysipelas; Scalp; Cellulitis; Immunocompetent; Uncommon Localization

Introduction

Erysipelas is a superficial infection affecting the upper epidermis and superficial lymphatics, commonly occurring in elderly and immunocompromised patients [1]. Its etiology is poorly defined as causative bacteria are isolated only in a minority of patients [2]. However, most authors agree that beta-haemolytic streptococci are the main causative pathogens [3]. It is characterized by sudden onset and rapid course with the presence of systemic symptoms like fever, chills and sometimes regional lymphadenopathy [4]. Clinically, patients typically have a well-demarcated, erythematous, indurated, rapidly spreading patch with a palpable advancing border on the face or extremities [5]. The diagnosis is principally clinical based on the appearance of the lesions and associated clinical features [1]. Additionally, the recommended treatment are systemic antibiotics, mainly penicillin [4]. Finally, the prognosis is usually good in patients handled in a timely manner, as they tend to recover without problems [5]. We report a case of an exceptional localization of erysipelas on the scalp in a patient with bilateral retroauricular intertrigo on acne keloids scars.

Case Report

A 50-year-old chronic smoker male patient, with a history of nodulocystic acne with diffuse keloids scars on the retroauricular areas, presented to our dermatology department with an acute onset of fever, chills and scalp pain. Three days before his admission, he noticed an erythematous and infiltrating plaque on the upper forehead area. This lesion rapidly enlarged to cover the central region of the scalp with spread onto the frontal margin. There had been no trauma nor previous illnesses. Clinical examination showed an asthenic and

febrile patient (39,5°C), presenting with a sharply demarcated warm, swollen and painful erythematous plaque of the scalp reaching to the frontal margin, measuring approximately 15 cm long axis, with the presence of vesicles and tight blisters on its surface, without any purpura, necrosis, crepitation or sensibility disturbances (Figure 1). Additionally, there were a bilateral and macerated retroauricular intertrigo found next to the acne scars that were inflamed, swallowing and painful (Figure 2), associated to conjunctival edema and gingivitis without any lymphadenopathy. Laboratory tests showed a leukocytosis of 22 230 with neutrophilia of 17 770 and araised C reactive protein (CRP) to 238. The diagnosis of scalp cellulite and scalp erysipelas were suspected and a cranio-facial CT was performed. This latter showed an infiltration of soft tissue, more pronounced at the frontal area, without deep lesions nor thrombosis. The diagnosis of scalp erysipelas was thence made and the patient was treated with systemic combination of antibiotherapy including Amoxicillin-clavulanic acid for 3 weeks and gentamycin for 5 days, in association to topical antifungal for the retro-auricular intertrigos. Additional treatment included a manual drainage of its retro-auricular abscess with subsequent use of red light sessions for the affected area, in order to reduce the inflammation. The patient showed then a good evolution with regression of its lesions, decrease of the fever and marked improvement of its biological assessment.



Figure 1: Clinical image showing a sharply demarcated swollen erythematous plaque of the scalp reaching to the frontal margin, of approximately 15 cm, with the presence of vesicles and blisters on its surface.



Figure 2: Clinical images showing a bilateral and macerated retroauricular intertrigo on keloid acne scars that showed inflamed and swallowing.

Discussion

Erysipelas is an infectious disease characterized by acute inflammation of the skin and subcutaneous tissue [4]. It has a bimodal distribution with a peak among young children and the elderly, and an increased risk in immunocompromised patients [5]. The disease is caused most often by exotoxins released by β -hemolytic streptococci group A (*Streptococcus pyogenes*), less often by streptococci groups B, C, G and Staphylococci [4]. However, microbiological methods to determine the aetiology of erysipelas have low sensitivity and treatment is in most cases empirical [3]. The most common site of Erysipelas are legs, face, less commonly upper extremities and other areas of the body [4], thus, making the localization in our case on the scalp very uncommon. The resulting clinical picture is usually a skin area that is red, raised, and well-demarcated from the surrounding normal skin [6]. The infection shows rapid, irregular, lateral spread over a few days and can further progress to a more severe infection with bullae formation and severe necrosis [5]. In addition, there may be associated ulceration, purulent discharge, soft tissue oedema, abscess formation and lymphadenopathy [1]. Patients may also complain from associated symptoms such as nausea, pain, fever and chills [3]. On physical examination, the area involved is usually tender and warm on palpation with lymphangitic streaks and lymphadenopathy [5]. Occasionally, a primary lesion such as a wound or skin crack is present [3]. In fact, this skin disruption is usually due to abrasion, herpes simplex virus infections, fungal intertrigo, or other trauma, but may also result from insect bites and ulcers [5]. The diagnosis is principally clinical; however, laboratory blood testing may show a raised white cell count and C-reactive protein level, nevertheless, normal biochemical markers do not exclude disease [1]. Bacteraemia is rare in erysipelas with only 4.6% of the patients reported in previous studies having positive blood cultures [2]. Although MRI and CT are rarely performed, they may be useful for detecting deeper infection [5], as in our case where CT were used to eliminate the diagnosis of scalp cellulitis, which is more common on this localization. Differential diagnosis can be wide, and includes mainly insect bites, cellulitis, allergic contact dermatitis and necrotizing fasciitis [5]. In fact, Erysipelas cannot always be distinctly separated from cellulitis, which refers to a deeper soft tissue infection involving the dermis and subcutaneous fat [3], thus making its recognition challenging in daily clinical practice [6].

The specific management of erysipelas depends upon the location and severity of the infection and patient comorbidities [1]. In fact, it is a common skin infection causing significant morbidity in patient which often have underlying conditions [3]. Simple measures include analgesia, rest and fever control [1]. However, the mainstays of the treatment are systemic antibiotics, especially penicillin [4]. Additionally, the rash should be delineated and reviewed regularly so that response to treatment may be assessed [1]. Patient education is also important and it cannot be overlooked [4]. The prognosis is usually excellent for patients receiving suitable and timely treatment, with most patients experiencing a complete recovery after antibiotics and few experiencing recurrences [5].

Conclusion

In summary, we present a case of an unusual localization of erysipelas. We also highlight the importance of looking for an entryway that might cause this disease and to correctly treat it to prevent it from recurring, especially chronic retroauricular intertrigo that are uncommon but were present and persistent in our patient because of the cheloid scars of his acne. However, clinicians should roll out other differential diagnosis to prevent severe complications.

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