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Impetigo: Diagnosis and Treatment at the First Level of Care

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ABSTRACT

Bacterial skin infections are processes that are produced by the direct or indirect presence of different bacteria, which can infect the skin and/or its annexes. Knowledge of these processes is relevant because, although there are some unimportant and exclusively local infections, there are others that can lead to systemic diseases and lead the patient to a septic state and, if complicated, death. This work tries to expose the clinic and the characteristics of impetigo on the subject of a case. Bacterial infections mainly affect the leg and foot, however face involvement is important due to its clinical implications.

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INTRODUCTION

Bullous impetigo predominates in young infants with no sex predilection. It is more frequent in low socio-economic strata, in summer, tropical climates and in malnourished children. Its frequency is higher when there are traumas, insect bites, pre-existing pruritic dermatoses, extracutaneous pyogenic infections and poor personal hygiene.[1]

Staphylococcal impetigo, like other pyodermas, is transmitted from person to person, through hands and nasal secretions. It is important to identify the asymptomatic carrier state as it is difficult to eradicate (S. aureus colonizes the anterior nostrils and moist parts of the body) and can perpetuate the problem. [1,2]

The epidermis is made up of 5 layers that go from deep to superficial from the basal layer to the corneum. Within the basal layer, keratinocytes proliferate and migrate upwards to the other layers. As a structural part of the keratinocytes are the desmosomes, which are adherent protein filaments that join their cytoskeleton with that of other neighboring keratinocytes. Desmoglein 1 (Dsg-1) is expressed in all keratinocyte desmosomes, in any stratum of the epidermis. The exfoliative toxins produced by S. aureus are serine proteases that bind to Dsg-1 and alter its function, producing separation between keratinocytes or acantholysis, thus forming a blister within the epidermis. [2]

CLINICAL AND CASE PRESENTATION

The initial lesion is a flaccid blister on apparently normal skin, which ruptures, leaving a moist erythematous base and a halo of peeling skin. The lesions dry quickly and become covered with light, thin, superficial crusts. A clinical form that occurs in the neonatal period is called staphylococcal pemphigus of the newborn; This can be serious and a possible entry point for staphylococcal sepsis, in addition to having a high rate of contagion when it occurs in a neonatal ward. Bullous impetigo is considered a mild, localized form of staphylococcal scalded skin syndrome, in which the toxin does not diffuse beyond the focus of infection. Complications are rare, but fever, malaise, and regional adenopathy may be present. Staphylococcal scalded skin syndrome may also be present. The age group most at risk are older infants who no longer have maternally transmitted passive immunity but still do not have antibodies and renal clearance of the toxin is decreased. [3,4]

Bullous impetigo is the most common pyoderma, especially in children. It presents acidic and purulent blisters that break easily, causing superficial erosions with abundant

exudation and extensive crusts between yellow and brown (meliceric) with annular limits with remains of detached skin. Gradually the scabs are surrounded by lesions new ones also appearing at a distance by autoinoculation. Nonbullous impetigo produces a brittle vesicle pustular that immediately ruptures, giving rise to thicker and more adherent crusts than

in bullous impetigo. The differential diagnosis between both presentations. It is very difficult 50% of impetigo cases are of mixed etiology it affects the face, extremities, dorsal and interdigital área of the foot and skin folds. Niskosky's sign positive. As a complication, it can produce scald syndrome. Appears in children with poor hygiene and is more frequent in the summer season by contagion on beaches. When observed in adults, it is usually of the bullous type. [5,6]

On this occasion, a 9-year-old male came to the clinic accompanied by his mother for presenting scabs on his face for 2 weeks, which worsened with home remedies, so he went to the emergency room. He was diagnosed with impetigo without data on severity, for which he proceeded to antibiotic therapy with empirical antibiotics and a subsequent evaluation was carried out one week later with significant improvement. (Figure 1)

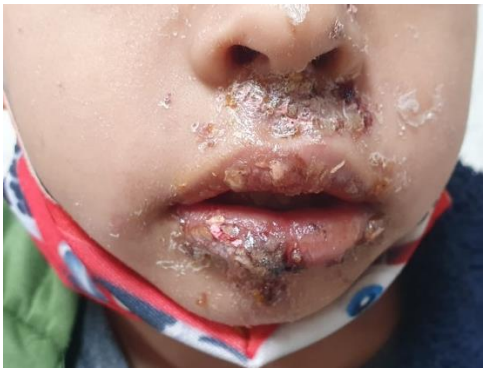

Figure 1. Peeling skin with meliceric crusts

DIAGNOSTIC APPROACH

Diagnosis is clinical and blood agar culture is only performed when there are doubts about the etiological agent, in which Gram-positive cocci in clusters will be observed. The differential diagnosis will be made mainly with those lesions that present circumscribed elevation of the skin. It consists of washing the area with soap and water, or chlorhexidine. Among the best-acting topical antibiotics are chlorohydroxyquinoline, mupirocin, fusidic acid, and bacitracin. In extensive lesions, systemic antibiotics are recommended, such as dicloxacillin, the dose in children is 100 mg/kg/day. Other alternatives are erythromycin 30 mg/kg/day1 and cephalexin 2550 mg/kg/day.5 If it is documented that the infection is caused by methicillin-resistant S. aureus, trimethoprim-sulfamethoxazole can be used in combination with rifampicin, clindamycin, doxycycline5 ,6 or vancomycin if there is intolerance to the oral route, its dose in children is 40 mg/kg/day divided into 4 doses IV;7 however, when vancomycin is used, it must always be certain that the infection is caused by a methicillin-resistant S. aureus since this antibiotic is much less effective for susceptible S. aureus strains. [7,8,9]

CONCLUSIONS

There are numerous bacterial infections that can affect the dermis in its different areas of the body. In this article it is done a review on impetigo as well as a severe case of impetigo as well as its management.

It is essential to know the clinic and characteristics to make a good diagnosis and identify the agent causal to carry out the most appropriate treatment as well as perform the most appropriate hygienic measures to prevent this condition.

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