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IMAGES IN CLINICAL PRACTICE

A MINOCYCLINE-RESPONSIVE DERMATOSIS

Joana Filipa Pinto Oliveira[1], Susete Vieira[2], Catarina Menezes[2], Filipe Sá[3], Paula Fonseca[3].

[1]Service of Pediatrics of CHTMAD, Vila Real, Portugal,
[2]Service of Pediatrics of CMIN, Porto, Portugal,
[3]Service of Pediatrics of CHMA, Famalicão, Portugal.

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A female patient, 16 years old with a body mass index of 30,7 kg/m^2 was directed to the adolescent pediatric consultation department due to the presence of several planar hyperpigmented papillomatous lesions on the cervical region, breast and armpits, having evolved over two years. The eruptions first started on the neck and spread progressively to the armpits. The patient noted a considerable increase in the emergence of new breast lesions over the last semester. The lesions were asymptomatic and prevailed despite the application of several topical medications, including antifungal agents, which rendered ineffective on the number nor size of the lesions. Additionally, family history review did not reveal comparable dermatological conditions. During physical examination, it was possible to observe numerous hyperpigmented macules and papillomatous lesions with mild scaling. These lesions were conjoined at the center and displayed a mesh-like pattern extending to the outer regions of the cervical, breast and axillae areas (Figure 1). The adolescent performed laboratory blood studies 2 months before the consultation (renal, thyroid, hepatic function and hemogram) which showed normal results, despite a slight elevation of HOMA-IR. Possible diagnoses considered included CRP, AN, pityriasis versicolor and macular amyloidosis. The patient was empirically prescribed with oral minocycline at a daily dose of 100 mg for six weeks. After 1 month, during a follow-up evaluation, a regression of lesions across all affected sites was observed (Figure 2).

What is the diagnosis?

Gougerot and Carteaud's CRP is an out-of-ordinary dermatosis typically observed in adolescents. Clinically, this condition features enduring pigmented lesions and textured macules, papules, patches or plaques. The dermatological lesions typically exhibit confluence at the central region and a grid-like pattern towards the margins. Moreover, these eruptions commonly occur in areas including the cervical region, the space between the shoulder blades, the regions

Figure 1. Multiple hyperpigmented papilomatous lesions showing mild texture, confluent in the center and a mesh-like pattern towards the periphery over breast (A), axillae (B) and cervical(C) regions.

Figure 2. Regression of the lesions after 1 month of orally administered minocycline treatment breast (A), axillae (B) and cervical (C) regions.

Address for Correspondance: Joana Filipa Pinto Oliveira, Academico Futebol Club, Porto, 4200-602, Portugal.

Email: joana.pinto.oliveira.92@gmail.com

between the breasts and the axillary regions.[4] CRP's precise cause remains elusive; however existing literature proposes a potential association with aberrant excessive keratinization of the epidermis in conjunction with an inherent propensity for a heightened proliferative reaction to colonization by M furfur.[5] In recent studies, the identification of Dietzia spp. on the epidermis has emerged as a potential contributor to the etiology of CRP. Additional potential contributors to CRP encompass endocrine dysregulations including insulin resistance and hypothyroidism, sensitivity to UV light, a form of cutaneous amyloidosis and and genetic predisposition.[1] CRP is frequently clinically misdiagnosed as pityriasis versicolor and typically does not respond to antifungal medications.[6] In the past, CRP was considered a clinical form of AN but these two differ in appearance because AN has a lighter on its lesions.[3]

Seongmoon Jo et al[6,7] proposed an update to the original criteria proposed as follows:

(1) Clinical manifestation featuring appearance of scaly brown macules and patches with some exhibiting a mesh-like reticulate macules and wart-like (papillomatous) nature.

(2) Predominantly affecting Upper torso and cervical region or skin flexural folds.

(3) Negative fungal staining of scales;

(4) excellent response to antibiotic treatment.

Multiple treatment options are currently available for Gougerot and Carteaud's CRP, among which Minocycline has been recommended as the most effective treatment probably due to its anti-inflammatory, immunosuppressive and anti-proliferative properties.[8] More recent reports support that various oral antibiotics including azithromycin, clarithromycin and tetracyclines also have been successful in treating CRP. The effect of antibiotics might be predominantly anti-inflammatory; however, no bacteria, even in the role of colonizers, were identified in the lesion sites or biopsied specimen before. The debate on the etiology of CRP has lasted for decades and continues without a definite conclusion. The frequent onset of CRP in adolescents or young adults, the occasional association with obesity and the predilection for the seborrheic areas of the trunk suggest an association with sebum production or an alteration of sebum by resident bacteria. Minocycline is effective in ameliorating acne, in part, by inhibiting the growth of Propionibacterium acnes, a normal inhabitant of skin. It may be that CRP represents an abnormal host response to P. acnes or other resident flora and that the effectiveness of minocycline in CRP stems from its antibiotic properties.[9] In pediatrics the initial dose of minocycline is usually 4 milligram (mg) per kilogram (kg) of body weight followed by 2 mg per kg of body weight every 12 hours during 6 to 10 weeks.[6,7,8] Additionally, alternative, but less effective oral treatment options for CRP such as isotretinoin, acitretin and etretinate are available. In addition, multiple topical agents including tacalcitol, selenium sulfide, ketoconazole cream, tretinoin, tazarotene and calcipotriene (calcipotriol) have also been used.[1] The authors highlight this clinical event of a 16-year-old obese female presenting numerous pigmented papillomatous asymptomatic dermal irregularities, misdiagnosed as AN for 2 years, in which the oral administration of minocycline on doses of 50-100 mg on a twice a day regime, resulted in considerable regression of the skin abnormalities after 1 month. CRP represents an infrequent dermatosis characterized by a persistent and recurring nature, predominantly observed among adolescents. The cause of CRP remains a topic of debate; however, it is widely acknowledged as a condition linked to irregularities in keratinization. Its morphological similarity to AN and pityriasis versicolor often leads to misdiagnosis and mistreatment, causing significant social discomfort for the affected individuals. Minocycline continues to stand as the primary treatment for this condition due to its favorable patient response and minimal occurrence of side effects.

Compliance with Ethical Standards
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