Confluent and reticulated papillomatosis of Gougerot-Carteaud in a North African patient

Dorsaf Elinkichari[1], Kahena Jaber[1], Faten Rabhi[2], and Raouf Dhaoui[1]

[1]Military Hospital of Instruction of Tunis
[2]Hopital Militaire Principal d'Instruction de Tunis

January 7, 2022

Abstract

Confluent and reticulated papillomatosis (CRP) is a rare skin condition of uncertain etiology. The anti-bacterial and most importantly the anti-inflammatory mechanisms of some antibiotics seem to explain the effectiveness of these medications. Other measures such as reducing weight and treating an underlying endocrine disorder may be helpful.

Confluent and reticulated papillomatosis of Gougerot-Carteaud in a North African patient

Dorsaf Elinkichari[1,2], Kahena Jaber[1,2], Faten Rabhi[1,2], Raouf Dhaoui[1,2]

[1]Department of Dermatology, The Military Hospital of Tunis, Tunis, Tunisia

[2]Faculty of Medicine of Tunis, University of Tunis El Manar, Tunis, Tunisia

Correspondence

Dorsaf Elinkichari, Department of Dermatology, The Military Hospital of Tunis, Tunis, Tunisia.

Email:*dorsaf.elinkichari@gmail.com*

Key Clinical message

Bacterial proliferation and endocrine factors may have synergistic contributions to the development of CRP. Treatment is therefore based on antibiotics but other measures such as reducing weight and screening for endocrine disorders may be useful.

Abstract

Confluent and reticulated papillomatosis (CRP) is a rare skin condition of uncertain etiology. The anti-bacterial and most importantly the anti-inflammatory mechanisms of some antibiotics seem to explain the effectiveness of these medications. Other measures such as reducing weight and treating an underlying endocrine disorder may be helpful.

Key words

Clinical Dermatology, Keratinization disorders, Rare diseases, Treatment

The patient has given written informed consent to the publication of his case details.

Introduction

Confluent and reticulated papillomatosis (CRP) is an acquired keratinization disorder of uncertain etiology[1]. The disease was first described in the French literature in the early 20th century by Gougerot and Carteaud

and is also known as Gougerot-Carteaud syndrome[2]. This rare skin condition is reported to occur in different ethnic groups and geographic regions[1]. Herein we report a case of CRP in a North African patient.

Observation

An otherwise healthy, 30-year-old man, presented with a non-pruritic hyperpigmented skin lesions of the trunk. At the time of presentation, the eruption has been present for 3 years and different antifungal treatments were ineffective. Upon physical examination, we noted brown to hyperpigmented hyperkeratotic macules and papules on the center of the upper trunk that coalesce into reticulated plaques in the periphery of the chest and in the axillar region (figure 1). Wood's lamp examination was negative for yellowish green fluorescence and fungal staining was negative for fungus. Histological examination showed orthohyperkeratosis, papillomatosis and focal acanthosis. The patient was treated with doxycycline 100 mg twice daily with a complete remission after four weeks (Figure 2). No recurrence was noted within two months of follow-up.

Discussion

CRP is a rare skin condition first described in 1927[2]. It is asymptomatic in most of the times but can be pruriginous[1]. In 2006, Davis et al proposed five criteria for the diagnosis of the disease[3], which were all displayed by our patient. CRP has been attributed for so long to the infection with Malassezia furfur[1]. However, as observed in our case, studies have been inconsistent with the detection of yeast in affected patients[3]. The currently admitted theory is that CRP is related to a bacteria: *Dietzia spp (anaerobic* gram-positive coccus, order of actinomycete). Noninfectious causes of CRP have been suggested but seem less likely including endocrine disorders especially insulin resistance explained by the pro-mitotic and anti-apoptotic effects of hyperinsulinemia, reaction to UV light and a variant of cutaneous amyloidosis[1,4]. Our patient was not obese and did not have diabetes, the eruption was located on a covered area and histology did not show amyloid deposits upon Congo red coloration.

Oral minocycline 50-100mg twice daily is the first line treatment[3]. Recent reports of the efficiency of macrolides may make these antibiotics the privileged treatment for CRP, as they are safer than minocycline[5]. These medications are effective because they are antibacterial but most importantly anti-inflammatory[3]. Systemic retinoids were previously used because of their keratoregulatory effect but have now given way to safer treatments like minocycline and azithromycin[5–7]. Lately, Ozdemir et al reported the effectiveness of oral contraceptives that contain progesterone in the treatment of CRP in a patient with polycystic ovarian syndrome[8]. More recently, Krishnamoorthy et al described a case of CRP that started to resolve immediately after bariatric surgery[9]. These observations strengthen the hypothesis of the hormonal factor in the genesis of CRP.

Conclusion

Much remains to be clarified about the pathogenesis of this rare condition. Bacterial proliferation and endocrine factors may have synergistic contributions to the development of CRP. Treatment is therefore based on antibiotics but other measures such as reducing weight, screening for endocrine disorders, and treating them may be useful.

CONFLICT OF INTEREST

None. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

AUTHOR CONTRIBUTIONS

Dorsaf Elinkichari is the guarantor of the content of the manuscript, including the data and analysis. Kahena Jaber contributed to acquisition of data, conception, and interpretation of information, revised it critically for important intellectual content, and gave final approval of the version to be submitted. Faten Rabhi revised data critically for important intellectual content. Mohamed Raouf Dhaoui contributed to interpretation of data and revision of the manuscript.

ETHICAL STATEMENT

Written informed consent was obtained from the patient.

References

1. Le C, Bedocs PM. Confluent And Reticulated Papillomatosis. In:*StatPearls* . StatPearls Publishing; 2021. Accessed December 18, 2021. http://www.ncbi.nlm.nih.gov/books/NBK459130/

2. GOUGEROT H. Papillomatose pigmentee inominee. *Bull Soc franc drrmat et syph* . 1927;34:719-721.

3. Davis MDP, Weenig RH, Camilleri MJ. Confluent and reticulate papillomatosis (Gougerot-Carteaud syndrome): a minocycline-responsive dermatosis without evidence for yeast in pathogenesis. A study of 39 patients and a proposal of diagnostic criteria: Confluent and reticulate papillomatosis. *British Journal of Dermatology* . 2006;154(2):287-293. doi:10.1111/j.1365-2133.2005.06955.x

4. Cannavo S, Guarneri C, Borgia F, Guarneri B. Confluent and reticulated papillomatosis and acanthosis nigricans in an obese girl: two distinct pathologies with a common pathogenetic pathway or a unique entity dependent on insulin resistance? *J Eur Acad Dermatol Venerol* . 2006;20(4):478-480. doi:10.1111/j.1468-3083.2006.01476.x

5. Scheinfeld N. Confluent and Reticulated Papillomatosis. *Am J Clin Dermatol* . 2006;7(5):305-313. doi:10.2165/00128071-200607050-00004

6. Baalbaki SA. Confluent and Reticulated Papillomatosis: Treatment With Etretinate. *Arch Dermatol* . 1993;129(8):961. doi:10.1001/archderm.1993.01680290033005

7. Solomon BA, Laude TA. Two patients with confluent and reticulated papillomatosis: Response to oral isotretinoin and 10% lactic acid lotion. *Journal of the American Academy of Dermatology* . 1996;35(4):645-646. doi:10.1016/S0190-9622(96)90703-3

8. Özdemir S, Özdemir M, Toy H. Confluent and reticulated papillomatosis associated with polycystic ovary syndrome treated with a combined contraceptive containing drospirenone. *Journal of the European Academy of Dermatology and Venereology* . 2009;23(3):358-359. doi:10.1111/j.1468-3083.2008.02847.x

9. Krishnamoorthy M, Nadler E, Vaidya S. Resolution of confluent and reticulated papillomatosis after bariatric surgery. *Clin Obes* . 2021;11(1). doi:10.1111/cob.12427