BRIEF COMMUNICATION

A rare case of confluent and reticulated papillomatosis of Gougerot and Carteaud successfully treated with doxycycline

Confluent and Reticulated Papillomatosis (CRP) is a rare acquired ichthyosiform dermatosis due to aberrant keratinization which presents as persistent scaly brown papules. (1) It is usually located on the proximal part of the body such as the neck, axilla and upper trunk. The name of the disease came from the characteristic pattern of the lesions, which appear in the center as confluent and netlike in the periphery. [1] It is mostly asymptomatic and is seen in young adults. Due to the rarity of the disease it is usually misdiagnosed as tinea versicolor.

A 23-year-old Filipino male presented with a one year history of multiple, pruritic, hyperpigmented, reticulated macules, patches and scaly plaques on the back, chest and shoulder (Fig. 1a-c). The patient was treated initially as a case of tinea versicolor and was given antifungal cream for several weeks with no improvement noted. Persistence of the lesions prompted consult in our institution.

Laboratory investigations included a KOH smear and 4-mm skin punch biopsy. The KOH smear was negative for fungal elements. Histopathology showed orthokeratosis and hyperkeratosis of the stratum corneum. The epidermis revealed acanthosis with spongiosis and subepidermal fibrosis. A mild superficial perivascular inflammatory infiltrate of lymphocytes in the dermis was observed (Fig. 2). No fungal elements are seen on H and E as well as on PAS and GAS stains. On clinicopathologic correlation, the findings were consistent with the diagnosis of confluent and reticulated papillomatosis. Patient was given Doxycycline 100 mg/capsule once a day for 4 weeks with noted clearance of lesions from baseline to 4 weeks (Fig. 3).

Confluent and Reticulated Papillomatosis (CRP) is seen in higher frequency in Caucasians with a male predilection of 1.4:1. [1] Occurrences are usually seen between ages of eight to thirty-two years old with a mean of fifteen years old. [1] CRP is usually asymptomatic but may be pruritic in other individuals. The lesions appear as multiple brown scaly papules coalescing in the center and netlike in the periphery seen in the trunk, back, and axilla. [2] Proposed etiological causes include amyloidosis, obesity, infection with *Dietzia papillomatosis,* overexpression of keratin-16 (K16) and ulltraviolet (UV) light. [1]

CRP is usually diagnosed clinically however histopathology may also be helpful in eliminating other differential diagnoses.[1] In 2014, Jo and colleagues, proposed a diagnostic criteria for the diagnosis of the disease in which all should be fulfilled. This includes the following: (1) presence of scaly brown macules and patches with some appearing reticulated and papillomatous, (2) involvement of upper trunk, neck, or flexural areas, (3) negative fungal staining or no response to antifungal treatments and (4) excellent response to antibiotics. All of which are present in our patient. [3]

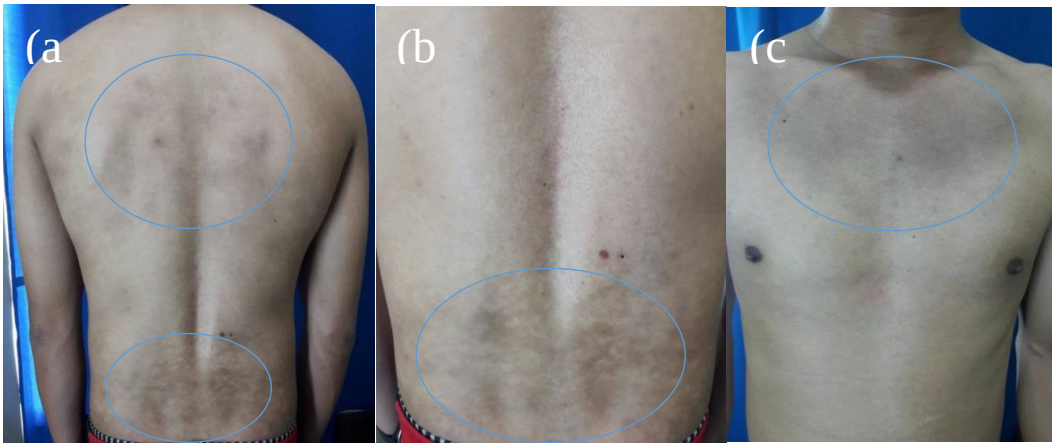
Topical medications such as antifungals, retinoids and antibacterials are use for treating CRP. [1] Oral antimicrobials are considered the main treatment because of their anti-inflammatory effect. [1]

Minocycline is the first-line of treatment given at 50 mg/capsule twice a day for 1-½ months. However, the use of Minocycline was met with concerns because of its high cost and issue concerning toxicity. The possible side effects of this first line therapy include drug-induced hypersensitivity, pigmentary changes, vestibular toxicity and drug-induced lupus. [1]

Doxycycline is a 2nd generation tetracycline like minocycline. It binds to the 30s subunit thus inhibiting the synthesis of protein and growth of bacteria. Compared to minocycline it has less frequent dosing and improved safety. [5] In a systematic review written by Smith et. Al on the safety of doxycycline and minocycline, the authors concluded that there is a very low incidence of adverse effects with either drugs. However, there were fewer reported side effects with doxycycline than with minocycline. Because of its better safety profile, we gave our patient Doxycycline 100mg/capsule once a day for 4 weeks with complete resolution noted.

Reported cases show that clinical remissions were sustained for up to 2 years. [6] Recurrences are not common and are usually seen in patients not treated with antibiotic therapy with a range of 13.8% to 15.4%. [7,8] For recurrences, oral antibiotics such as minocycline or doxycycline may be given as initial treatment for those not treated with antibiotics. For those who had previous antibiotic therapy, another course of antibiotic treatment may be given to produce sustained remission. [1]

Due to the rarity of confluent and reticulated papillomatosis (CRP) it is commonly misdiagnosed as other skin diseases, most commonly hyperpigmented tinea versicolor.The main treatment options are antimicrobials. The use of doxycycline as an alternative treatment is promising because of its accessibility, cost-effectiveness and better safety profile.



Figures 1 (a-c). Multiple, hyperpigmented, reticulated macules, patches and scaly plaques on the back and chest.

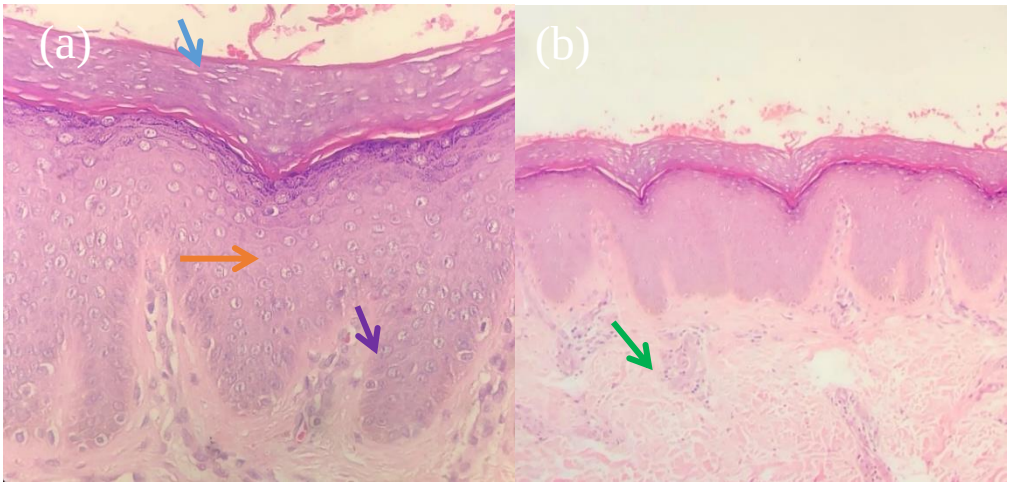


Figure 2. (a) Orthokeratosis and hyperkeratosis of the stratum corneum (blue arrow). There is acanthosis (violet arrow) and spongiosis (orange arrow) of the epidermis (H & E, x 400). (b) The dermis reveals a mild superficial perivascular inflammatory infiltrate of lymphocytes (green arrow). No fungal elements are seen (H & E, x 100).

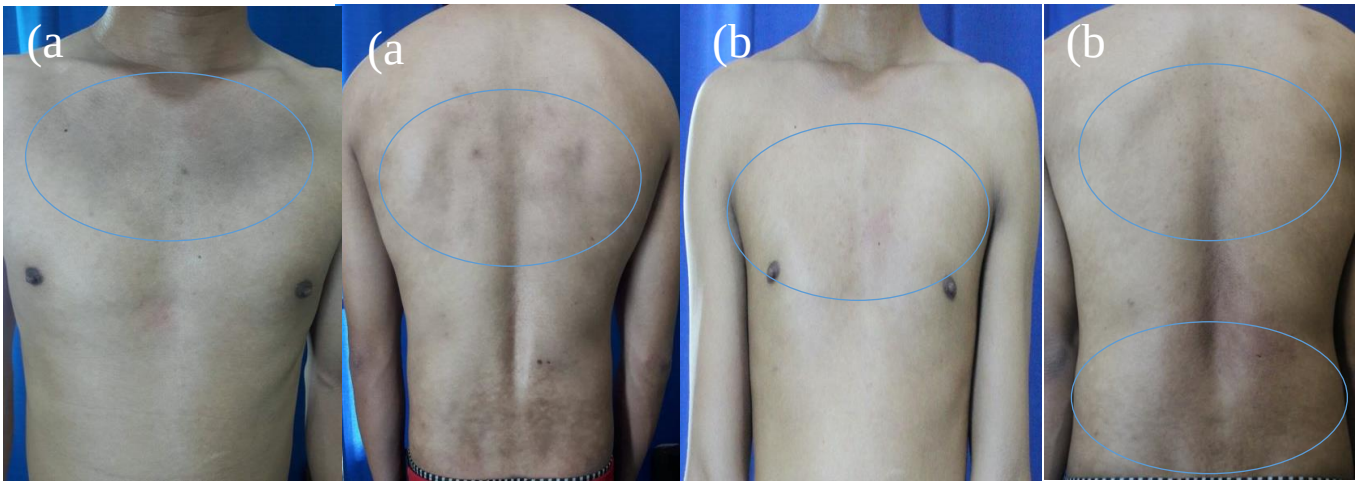


Figure 3. Clearance of the lesions on the chest and back from (a) baseline and (b) after 4 weeks of Doxycycline 100mg/capsule

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