Successful treatment of confluent and reticulated papillomatosis with tetracycline and mupirocin

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Introduction

Confluent and reticulated papillomatosis characterized by hyperkeratotic-pigmented papules is a rare dermatosis, which tends to settle in seborrheic areas. Some cutaneous disorders share the same features. Herein, we report a 51-year-old man with confluent and reticulated papillomatosis who was followed up as tinea versicolor which was unresponsive to treatment for six months. Confluent and reticulated papillomatosis should be kept in mind in patients with localized reticular pigmentation involving the upper trunk and neck. Keywords: Confluent and reticulated papillomatosis, tinea versicolor, tetracycline, mupirocin

Case Report

A 51-year-old male patient presented with the complaint of rash in the neck region, over a period of six months. Physical examination revealed reticulated, hyperpigmented, and slightly scaly plaques in the neck region (Figure 1). His medical history revealed frequent use of topical and oral antifungal agents for the treatment of tinea versicolor. Potassium hydroxide preparation of the skin lesion was negative. Histopathological examination of the punch biopsy specimens revealed papillomatosis and acanthosis in the epidermis with mild hyperkeratosis in the stratum corneum, a slightly thickened stratum granulosum, and melanosis in the basal layer (Figure 2). The patient's complaints resolved completely with oral tetracycline 500 mg twice a day and...
topical mupirocin once a day at the end of two weeks of treatment (Figure 1).

![Figure 1](image1.png) a) Images of skin lesion before and b) after treatment

![Figure 2](image2.png) a) Papillomatosis and acanthosis in epidermis with mild hyperkeratosis in stratum corneum, a slightly thickened stratum granulosum, melanosis in the basal layer (hematoxylin and eosin x200). b) Melanosis in the basal layer of epidermis with papillomatosis (hematoxylin and eosin x400)

**Discussion**

Disordered keratinization, altered keratinocyte differentiation and brown hyperpigmentation due to increased melanosomes in the epidermis are some histopathological features of CRP. It is a white and male predominant disease. Age of onset of CRP ranges between 3 and 55-year. Cases from Turkey are summarized in Table 1. Our patient was a 51-year-old male patient, and consistent with common features of CRP such as age, race, localization and general aspects of the lesions. Seborrhic areas such as the nape, axillae, upper chest and back, forehead and the pubic region are the typical involvement areas of the CRP. In our case, the involvement area was the neck region and the forehead and the pubic region are the typical involvement areas of the Seborrheic areas such as the nape, axillae, upper chest and back, forehead and the pubic region.

**Table 1. Confluent and reticulated papillomatosis: Cases from Turkey**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Gender</th>
<th>Age</th>
<th>Localization</th>
<th>Successful treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Açıkgöz et al.5</td>
<td>2014</td>
<td>Male</td>
<td>19</td>
<td>Chest</td>
<td>Doxycycline, topical tretinoin and calcipotriol</td>
</tr>
<tr>
<td>Açıkgöz et al.5</td>
<td>2014</td>
<td>Male</td>
<td>16</td>
<td>Chest</td>
<td>Doxycycline, topical tretinoin and calcipotriol</td>
</tr>
<tr>
<td>Erkek et al.9</td>
<td>2009</td>
<td>Female</td>
<td>48</td>
<td>Trunk</td>
<td>Isotretinoin</td>
</tr>
<tr>
<td>Ozdemir et al.10</td>
<td>2009</td>
<td>Female</td>
<td>21</td>
<td>Nose, mouth, intermammarian region</td>
<td>Ethinylestradiol, dospirenone</td>
</tr>
<tr>
<td>Gönül et al.1</td>
<td>2008</td>
<td>Female</td>
<td>19</td>
<td>Abdomen</td>
<td>Mupirocin</td>
</tr>
<tr>
<td>Atasoy et al.21</td>
<td>2006</td>
<td>Female</td>
<td>15</td>
<td>Knees, elbow</td>
<td>Azithromycin</td>
</tr>
<tr>
<td>Atasoy et al.5</td>
<td>2004</td>
<td>Male</td>
<td>21</td>
<td>Intercapular area</td>
<td>Azithromycin</td>
</tr>
<tr>
<td>Basak and Seçkin12</td>
<td>2001</td>
<td>Male</td>
<td>21</td>
<td>Trunk</td>
<td>Minocycline</td>
</tr>
<tr>
<td>Gülec et al.13</td>
<td>1999</td>
<td>Female</td>
<td>34</td>
<td>Trunk</td>
<td>Calcipotriol</td>
</tr>
<tr>
<td>Kürkçüoğlu and Celebi14</td>
<td>1995</td>
<td>Female</td>
<td>25</td>
<td>Trunk</td>
<td>Calcipotriol</td>
</tr>
</tbody>
</table>

*PubMed search results

CRP is clinically similar to tinea versicolor and can be easily confused diagnosed by clinical and histopathological findings. Histopathological examination reveals mild hyperkeratosis, papillomatosis, focal acanthosis and superficial perivascular lymphocytic infiltration. Although some treatment options such as salicylic acid, urea, topical and systemic retinoid, topical calcipotriol, tacrolimus, tazarotene, fluorouracil, antifungals, phototherapy and dermabrasion can be used, some studies of CRP performed in recent years have focused on the role of bacteria in the pathogenesis. Good response to antibiotics such as minocycline and azithromycin in clinical practice reinforces this theory. Side effects of azithromycin are fewer than minocycline. In addition, macrolide and tetracycline groups have both antimicrobial and anti-inflammatory effects via inhibition of metalloproteinase, hydrolase, phospholipase A2, tumor necrosis factor alpha, interleukin (IL)-1β, and IL-6 as well as suppression of IL-8 and neutrophil oxidative burst. Selenium sulphide can be effective due to keratolytic effect. Topical treatments such as tacrolimus are appropriate for relapsed patients with limited involvement. Systemic retinoids can be used in non-responders. Therefore, antibiotics with anti-inflammatory effect are effective and a first-line treatment option in CRP. Thus, we selected tetracycline treatment with antimicrobial support of mupirocin which reduces epidermal proliferation by blocking of protein and DNA synthesis. Complete remission was obtained in our patient after a 2-week oral tetracycline and topical mupirocin treatment. Recurrence rates have been reported in the range of 13.8-15.4%. In these patients, repeating of treatment with effective antibiotics in responders and administrating other treatment choices in non-responders can be performed. Our patient is doing well in the follow-up period of 36 months.
with some dermatological diseases. CRP should be kept in mind in patients with localized reticular pigmentation in the upper trunk and nape. Thus, unnecessary and ineffective treatments and time loss for patients can be prevented. Due to the side effects of some antibiotics, tetracycline and macrolide groups can be considered as a first-line treatment option.

**Ethics**

**Informed Consent:** Informed consent was taken from patient.

**Peer-review:** Externally peer-reviewed.

**Authorship Contributions**


**Conflict of Interest:** The authors declare no conflict of interest.

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**References**