



Unexpected temporal localization of tuberculosis verrucosa cutis

Beklenmedik temporal lokalizasyonlu tüberkülozis verrukoza kutis

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Abstract

Clinical forms of cutaneous tuberculosis (TB) which is a chronic granulomatous disease, varies by the route of entry into the body, the number of bacilli, its virulence and the immunological response of the body. TB verrucosa cutis (TBVC) occurs in patients who have previously been affected by tuberculosis bacilli with healthy immunity. A 68-year-old male patient was referred to our dermatology outpatient clinic from an external dermatology center with complaint of verrucous plaques on the left temporal region, persisting for two months. After a diagnosis of wart and seborrheic keratosis, cryosurgery and destructive procedures were applied to the lesions of the patient many times. Histopathological examination revealed granulomatous textures classified by infiltration of inflammatory cells around the keratin plugs and giant multinuclear cells in the epithelium sublayer, and positive staining with CD68 was detected in immunohistochemical examination. The patient was diagnosed with TBVC clinically and histopathologically. At the end of the anti-tuberculosis treatment, the lesions largely regressed with postinflammatory hyperpigmentation.

Herein, we report a case of TBVC with unusual localization, which was initially misdiagnosed as wart and seborrheic keratosis. This case emphasizes the importance of differential diagnosis.

Keywords: Cutaneous tuberculosis, tuberculosis verrucosa cutis, cryosurgery

Öz

Kronik granülatöz bir hastalık olan deri tüberkülozu, giriş yoluna, vücudun immünolojik yanıtına, basil sayısına ve virülansa bağlı olarak çeşitli klinik formlarda ortaya çıkabilir. Tüberkülozis verrukoza kutis daha önce tüberküloz ile karşılaşmış olgularda ortaya çıkar. Altmış sekiz yaşında erkek olgu iki aydır sol temporal bölgesinde bulunan verrüköz plak şikayetiyle başvurdu. Hikayesinde, dış merkezlerde lezyonlarına siğil ve seboreik keratoz ön tanıları ile birkaç kez kriyocerrahi uygulanmış olduğu öğrenildi. Lezyonlarından yaptığımız histopatolojik inceleme sonucunda; keratin tıkaçları etrafında enflamatuvar hücreler ve epitelde çok çekirdekli dev hücrelerle karakterize edilen granülatöz yapılar gözlenmişti. CD68 boyası ile pozitif bir ekspresyon saptandı. Histopatolojik tanı tüberkülozis verrukoza kutis olarak yorumlandı. Anti-tüberküloz tedavisinin sonunda lezyonlar postenflamatuvar hiperpigmentasyon ile büyük ölçüde geriledi. Burada başlangıçta siğil ve seboreik keratoz olarak yanlış tanı konulan tüberkülozis verrukoza kutis olgusunu sıradışı lokalizasyonu ve ayırıcı tanısının önemini vurgulamak açısından sunduk.

Anahtar Kelimeler: Kutanöz tüberküloz, tüberkülozis verrukoza kutis, kriyocerrahi

Introduction

Clinical forms of cutaneous tuberculosis (TB) which is a chronic granulomatous disease varies by the route of entry into the

body, the number of bacilli, virulence and the immunological response of the body¹. Less than 2% of all tuberculosis cases are cutaneous tuberculosis (TB) cases². Endogenous

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Endogenous form cutaneous tuberculosis which is the form that the bacillus comes from in another location in the body is the most common clinical form of cutaneous tuberculosis. Endogenous forms of tuberculosis are classified as lupus vulgaris, scrofuloderma, acute miliary tuberculosis, and metastatic tuberculosis abscess. Exogenous forms of cutaneous tuberculosis; TB primer complex and TB verrucosa cutis (TBVC) are less common³. TBVC occurs in patients who have previously been affected by tuberculosis bacilli but have a healthy immunity¹. Herein, we report a case of TBVC on the left temporal location which was initially misdiagnosed as wart and seborrheic keratosis and emphasized the importance of the unexpected localization and the differential diagnosis.

Case Report

A 68-year-old male patient was referred to our dermatology outpatient clinic from an external dermatology center with complaint of verrucous plaques placed on the left temporal region, persisting for two months. The dermatological examination revealed painless, firm, verrucous, hyperkeratotic serpiginous plaques on the left temporal region (Figure 1A). With the misdiagnosis of verruca vulgaris and seborrheic keratosis, cryosurgery and destructive procedures were applied to the lesions of the patient many times. A skin biopsy was performed with the prediagnoses of TBVC, verruca vulgaris, lichen simplex chronicus, hypertrophic lichen planus, seborrheic keratosis, blastomycosis, chromomycosis, and sporotrichosis.

The histopathological examination revealed granulomatous textures classified by infiltration of inflammatory cells around the keratin plugs and giant multinuclear cells in the epithelium sublayer (Figure 1B), and a positive staining with CD68 was detected in the immunohistochemical examination. The patient was diagnosed with TBVC clinically and histopathologically. Our case was referred to the department of pulmonary medicine for systemic tuberculosis research. The tuberculosis skin test (also known as the PPD or tuberculin test) was positive with 11 mm. There was no pathology detected in the posteroanterior chest radiography, and pulmonary computed tomography. Primary tuberculosis focus that would lead to lymphomatous or hematogenous spread was not considered.

The family history of the patient was unremarkable for tuberculosis and he had not worked in any occupation that posed a risk of tuberculosis. Antituberculosis treatment (ethambutol 1500 mg/day, isoniazid 300 mg/day, rifampicin 600 mg/day, pyrazinamide 2 gr/day) was ordered. Two months after these combination of drugs, treatment was continued with rifampicin and isoniazid for four months. At the end of the antituberculosis treatment, the lesions largely disappeared

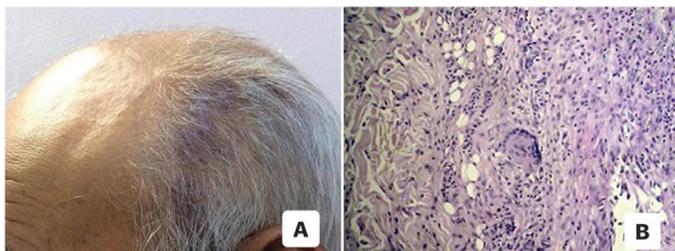


Figure 1. (A) The verrucous plaques seen on the left temporal region, (B) The multinucleated giant cells with periodic acid-schiff stain X 20

with postinflammatory hyperpigmentation (Figure 2). No recurrence was observed in the two-years follow-up of our patient. An informed consent form was obtained from the patient for this case report.



Figure 2. The lesions disappeared by post-inflammatory hyperpigmentation

Discussion

Tuberculosis is one of the major public health problems around the world⁴. In developed countries, tuberculosis is still important because of the increase in human immunodeficiency virus infection, the increase in malignancy, and the increase in cases receiving immunosuppressive treatment. Tuberculosis is also still important due to malnutrition and poor hygiene conditions in underdeveloped countries⁵.

Cutaneous tuberculosis is observed in about 2% of all cases of extrapulmonary tuberculosis⁶. The most observed forms of cutaneous tuberculosis are lupus vulgaris and scrofuloderma⁵. TBVC is a rare form of cutaneous tuberculosis, which is caused by exogenous inoculation of the bacillus into the skin through open wounds or abrasions in sensitized persons⁵. In a study published by Sehgal et al.⁷, TBVC was observed in approximately 6% of all skin tuberculosis involvement. This rate may vary between countries. The lesion of TBVC presents as a small, asymptomatic, indurated wart-like papule with a slender inflammatory border. It slowly grows in a serpiginous style into a verrucous or hyperkeratotic plaque. In untreated cases, the disease runs a prolonged chronic course⁸. In our case, the lesions were seen as firm, verrucous, hyperkeratotic plaques, which were seen on the left temporal area of the head.

The lesions of TBVC are mostly seen on extremities, which are generally areas that are exposed to trauma⁹. In Europe, the affected parts of the body are mostly the hands, but in Eastern countries, the knees, ankles, and buttocks are more often affected. In a study in Turkey by Ünal et al.⁵, all the TBVC lesions were reported on the extremities. In our case, the lesions were interestingly located on the left temporal region.

Paracoccidioidomycosis, leishmaniasis, sporotrichosis, chromomycosis, hypertrophic lichen planus, blastomycosis, atypical mycobacteriosis, verrucous carcinoma, iododerma, seborrheic keratosis, bromoderma, verruca vulgaris, lichen simplex chronicus, keratoacanthoma centrifugum, and pyoderma vegetans should also be considered as the differential diagnosis of TBVC¹⁰. The diagnosis of TBVC is challenging and requires the correlation of clinical, histological, and laboratory

findings. In variants of skin tuberculosis, one has to rely on examinations such as histopathology, acid-fast bacilli culture, or polymerase chain reaction (PCR) for confirmatory diagnosis¹¹. However, mycobacteria are difficult to see or isolate in culture¹¹, and the PCR method results in substantially negative pausibasic forms of skin tuberculosis (such as TBVC). The histopathological findings are characterized by significant pseudoepitheliomatous hyperplasia of the epidermis with giant cells. Granulomatous infiltration is typical in cutaneous histopathology, but caseous necrosis rarely found. Multinuclear giant cells are usually found in the histopathology, as seen in our patient.

Anti-tuberculous treatment regimens for pulmonary tuberculosis are usually sufficient to treat cutaneous tuberculosis because the bacillus burden in cutaneous tuberculosis is much less than that of pulmonary tuberculosis. Furthermore, an anti-TB therapy response may be useful as a diagnostic criterion. In this way, a successful response to treatment should be conducive to making a diagnosis¹². Cryotherapy, electrocautery, and surgical excision may be used in the treatment of localized lesions in addition to systemic treatment in the form of cutaneous tuberculosis such as scrofuloderma, TBVC, and lupus vulgaris.

TBVC masquerading on the temporal region, to our knowledge, has not been reported until now. Therefore, this deserves reporting in order to highlight the atypical location that TBVC can also be presented with. Herein, we report a case of TBVC, which was initially misdiagnosed as wart and seborrheic keratosis, and emphasized the importance of the unexpected localization and the differential diagnosis.

Conclusion

TBVC should definitely be considered in the differential diagnosis of verrucous lesions. In particular, the presence of inflammatory purple ring around the lesions, the absence of Auspitz's phenomenon in the lesions, and the unresponsiveness to the wart treatments should be warning signs. Dermatologists and pathologists should be aware of this condition, especially when dealing with verrucous lesions of the skin. TBVC on the temporal region is unexpected and needs to be highlighted to avoid misdiagnosis and incorrect, or delayed treatment.

Ethics

Informed Consent: An informed consent form was obtained from the patient for this case report.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: S.A.T., İ.Ö., M.C.A., Concept: S.A.T., Design: S.A.T., Data Collection or Processing: S.A.T., İ.Ö., M.C.A., Analysis or Interpretation S.A.T., İ.Ö., A.A., R.D., Literature Search: S.A.T., İ.Ö., Writing: S.A.T., İ.Ö., A.A., R.D.

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