Comparison of Oral Doxycycline and Topical Momethasone Furoate Treatments in Pityriasis Rosea

PİTİRİAZİS ROZEADA ORAL DOKSİSİKLİN İLE TOPİKAL MOMETAZON FUROAT TEDAVİSİNİN KARŞILAŞTIRILMASI

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Summary

Bacground: Pityriasis rosea is an acute and inflammatory disease, which has an unknown etiology. Increasing recent evidences points to an infectious agent in the etiology of the disease. Conflicting results have been reported in the treatment of the disease with dapsone, UV, ketotifen and erithromycin.

Objective: We aimed to compare oral doxycycline, which has antibiotic, antiviral, antiinflammatory and immunosuppressive effects, with topical momethasone furoate.

Material and Methods: In the present study, 20 patients received oral doxycycline (400mg/day), and 21 patients topical momethasone furoate (once daily). Patients in the both groups were evaluated before and every week after the treatment by using a pityriasis rosea severity score (PRSS).

Results: There was no significant difference between two groups in time to recovery after four weeks of treatment, whereas the fall in PRSS score in the oral doxycycline group after one week was found to be statistically high ($p<0,05$).

Conclusion: We suggest that oral doxycycline treatment may be of benefit in pityriasis rosea because it controls the symptoms in the short term.

Key Words: Pityriasis rosea, Treatment, Doxycycline

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Özet

Giriş: Pitiriazis rozea, nedeni bilinmeyen akut inflamatuar bir hastalıktır. Etiyolojisinde enfeksiyon ajanlarının rolüne dair bulgular giderek artmaktadır. Hastalığın tedavisinde dapson, UV, ketotifen ve eritromisin ile çelişkili sonuçlar bildirilmektedir.

Amaç: Bu çalışmada; antibiyotik, antiviral, antiinflamatuar ve immünsüpresif etkileri olduğu bilinen oral doksisiklin ile topikal mometazon furoat tedavisinin etkilerini karşılaştırmayı amaçladık.

Gereç ve Yöntemler: Çalışmaya; oral doksisiklin (400 mg/gün) tedavisi alan 20 hasta ve topikal mometazon furoat (günde bir kez) tedavisi alan 21 hasta alındı. Her iki gruptaki hastalar tedavi öncesinde ve haftalık kontrollerde pitiriazis şiddet skalası (PRSS) ile değerlendirildi.

Bulgular: Her iki grupta dört haftalık tedavi sonunda iyileşme zamanında istatistiksel olarak anlamlı fark olmamasına rağmen birinci haftadaki PRSS skorundaki azalma oral doksisiklin alan grupta istatistiksel olarak daha yüksek bulundu ($p<0,05$).

Sonuç: Bu bulgular ışığında, oral doksisiklin tedavisinin pitiriazis rozeada semptomların kısa sürede kontrol altına alınmasında yararlı bir tedavi altenatifi olduğu görüşündeyiz.

Anahtar Kelimeler: Pitiriazis rosea, Tedavi, Doksisiklin

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Pityriasis rosea (PR) is a self limiting and common skin disease. The cause of the disease is still unknown. It presents with erythematous lesions. PR frequently affects adolescents and young adults. Clinical and experimental findings suggest the presence of an infectious agent in its etiology. In several studies, various bacteria, yeasts and viruses have been implicated as the causative agent (1,2). In its management, conflicting results have been reported with dapsone (3), sun light (4), UV (5), ketotifen (6), and erithromycin (7).

In the present study, we aimed to compare oral doxycycline in PR treatment, which has antibiotic, antiviral, antiinflammatory and immunosuppressive effects, with topical momethasone furoate.

Material and Methods

Our study included 41 patients referred to the departments of Dermatology of Ankara Numune Education and Training Hospital and Fatih University Medical Faculty Hospital between January 1999 and November 2000. In all patients

PR diagnosis was made on clinical examination except in one patient who had not classical lesions, it was confirmed by histopathological examination. The patients were asked about their drug use, and symptoms such as fever, cough, sore throat and diarhea and their family history. Dermatological examination was made before and every week of the treatment. In each patient, the number of leukocytes, erithrocyte sedimentation rate, anti streptolysin O titer (ASO) and syphilis tests were evaluated.

Treatment Protocol

Patients were randomly divided into two groups. In the first group, oral doxycyclin (400mg daily) was given while in the second group topical momethasone furoate was applied (once daily) for four weeks.

In the doxycycline group, one patient was excluded from the study because of gastrointestinal complaints. All the patients were evaluated before and every week of the treatment with dermatological examination and pityriasis rosea severity score (PRSS).

Clinical Evaluation

PRSS had been adapted from the psoriasis area and severity score (PASI) (5)**.** PRSS was calculated in two regions; head and trunk (t), upper and lower extremities (e) in our patients. The severity of the disease was scored between 0-3 according to the number of lesions; 0 (no lesion), 1 (1-9 lesions), 2 (10-19 lesions), and 3 (20 or more lesions).

Three important symptoms of the disease, erythema, infiltration and squamation of the lesions were scored between 0-3; 0(absent), 1(slight), 2(moderate), and 3(severe). PRSS was calculated by the formula; PRSS= Nt (Et+It+St) Ne (Ee+Ie+Se).

Itching in the follow up of the patients was also evaluated similarly; 0(no itching), 1(mild, does not prevent patient from working or resting), 2 (moderate, quite severe, but not unbearable), and 3 (severe, prevents daily activities and sleep) (Table 1).

Results

In the present study, 20 patients received oral doxycyciline, while 21 patients received topical momethasone furoate. In doxycycline group, the ages of the patients ranged from 15 to 48, (mean: 26.1) and in the momethasone furoate group, ages ranged from 5 to 56 (mean: 26.14). Patients in both groups were compatible for age and sex. Syphilis tests yielded negative results in both groups. There was no growth in throat cultures in all of the patients. ASO level was found to be high (over 200 IU) in one patient in doxycycline group and in two patients in the second group.

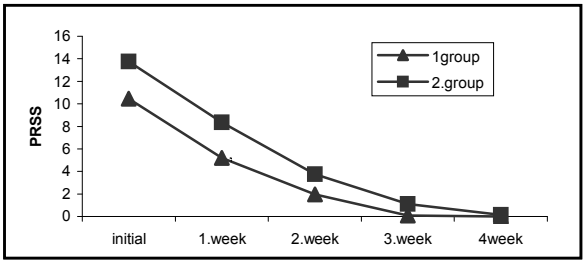
No statistically significant difference was found between two groups by student's t test in terms of time to recovery and weekly falls in PRSS scores. The decrease in PRSS scores observed in the first week of treatment in the doxycycline group was statistically high when compared with monomethasone furoate group (Table 2) ($p<0,05$).

Table 1. Clinical evaluation in Pitryasis rosea

	N	E	I	S	Pruritus
0	Absence	Absence	Absence	Absence	Absence
1	1-9	Mild (slightly pink)	Mild (perceptible infiltration)	Mild (perceptible scale)	Mild (if occurred only intermediate and did not interfere with work or rest)
2	10-19	Moderate	Moderate	Moderate	Moderate (if present for much of the day but at a tolerable level)
3	≥20	Severe (intense)	Severe (thick papule or plaque)	Severe (thick)	Severe (if it interfered with daytime activities or sleep)

E: Erythema I: Infiltration S: Squamous N: number of lesions
t: head and trunk e: upper and lower extremities
Pityriasis Rosea Severity Score (PRSS): Nt (Et+It+St)+ Ne (Ee+Ie+Se)

Table 2. Comparison of the change of PRSS scores in both groups



Group 1: Patients treated with oral doxycycline.
Group 2: Patients treated with momethasone furoate.
* When compared with initial scores, p<0,05.

Discussion

Pitryriasis rosea is an acute, self limited dermatosis of unknown cause characterized by oval papulosquamous lesions distributed on trunk and extremites. The condition was fist reported by Gilbert in 1860 (8). In PR, diagnosis is generally made by typical skin lesions. These lesions are circinated or oval, usually 2-6cm. in diameter, sharply defined, erhytematous and herald patch composed of these lesions appear, to be followed by lesions with the miniature appearance of the initial lesion, emerging throughout the body.

It has been reported in many studies that PR lesions are preceded by upper respiratory tract infections in 50% of the patients (2,9,10). In our patients, only three patients had high ASO levels and there was no growth of microorganism in throat cultures.

In addition, low recurrence rate and occurrence of relapse only after a long period suggests that PR allows long-term immunity (11).

There are some reports suggesting that the potential infectious causative agent of PR is HHV 7 (12) and in other report HHV 7 could not be found in the sera of the patients (13). Some other studies demonstrate that there is another viral agent from herpes virus family, which has not been described yet (14).

Favourable results have been reported with erythromycin treatment in PR (7). Tetracycline have long been used in dermatology, due to their antibiotic, antiinflammatory and immunosuppressive effects.

In this study, we aimed to investigate the possible effect of tetracycline in the treatment of PR. To our knowledge, our study is the first research on the use of tetracycline in PR. There was no statitically significant difference in overall duration of treatment and in time to recovery between two groups, whereas the decrease in PRSS scores which has been observed in the first week of treatment in the doxycycline group was statistically high when compared with momethasone furoate group.

In conclusion, we think that tetracycline may be an option in the treatment of PR, because of their short-term effect to relieve the symptoms.

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