FLUCONAZOLE IN THE THERAPY OF PITYRIASIS VERSICOLOR

ABSTRACT: The authors present the results of the systemic application of flucnazonole in therapy of Pityriasis versicolor. It was arranged for the total number of 38 patients, 18 females and 20 males. The diagnosis of diseases was established on the base of the clinical examination, the native mycological examination and by the using of Wood lamps. The therapy was passed by the using of 300 mg flucnazonole in a single dose, once weekly, during two weeks. The following period amounted to one week after the passed therapy. The therapeutic efficacy was assessed with regard to the clinical and mycological healing. The clinical efficacy was assessed semiquantitative on the base of increasing of the percentage rates of the total score of disease that was computed by collecting of the numeric values for every clinical argument typical for the disease, and the mycological efficacy on the base of the mycological findings and the fluorescence finding after lightening with the Wood's lamp. The controlling examinations were performed on day 0, 14 and 22. The results of investigations have shown that the complete clinical healing was achieved after two weeks of therapy in 94,74%, and the mycological healing in 92,11% patients. The rate of the mycological healing was evaluated after 1 week of following period equal to the rate of the clinical healing and it was also 94,74%. The undesirable effects of the drug applications weren't by any patient.

KEY WORDS: flucnazonole, Pityriasis versicolor, therapy

INTRODUCTION

Pityriasis versicolor (PV) is one of the most frequent fungal skin infections with chronic nature. As the disease cause it is recognized lipophytic yeast Malassezia that is well known as Pityrosporum ovale or Pityrosporum orbiculare, the resident of the normal skin flora are recognized as the disease cause (1). The transition from blastospore form to a mycelium makes this yeast pathogenic for the humans. The conversion in the form of mycelium occurs under the influence of variety of different predisposition factors. The most important factor are high temperatures and high humidities because of which the disease occurs with the low prevalence in the Scandinavian countries (1%) and
with the highest prevalence of 40—50% in tropical areas (2). For the appar-}
{tion of disease genetical factors are significant, which is corroborated by the}
lack of diseases in couples and its apparation in the cousins of the first, second
and third degrees of the kins.

The predisposition to frequent recurrences, the extension of skin changes,
often perturb the life qualities of the patients. This fact destined the dermatolo-
gists during recent years, towards the systemic application of antimycotics in
the attempt at more successful treatment (3, 4).

THE AIM

The study had the aim to check the efficacy and safety of oral application
of fluconazole in the therapeutic regime of 300 mg once weekly during two
weeks in the patients with PV. The following period of patients after treatment
has been a week after the passed therapy.

It is arranged the total number of 38 patients, 18 females and 20 males,
24 patients with the first manifestation of the disease and 14 with the recur-
rence of the disease.

It is established the diagnosis of the disease by the clinical and mycolo-
gical examination and by using of Wood’s lamp. The mycological examination
was the obligate diagnostic procedure for all cases regarding the cognition that
only Malassezia furfur produces indole which gives the fluorescence by lighten-
ing with Wood’s lamp.

It was semiquantitative assessment. The clinical efficacy of the drug was
assessed with regard to decrease of the total score values of the diseases (in
percentages) that it was computed by collecting the numeric values of the cli-
nical parameters typical for the disease, nevertheless it is taken in considera-
tion the size of the skin surfaces involved with the disease (Table 1).

Table 1. Assessment of the clinical efficacy

<table>
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<th>The total score</th>
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<tbody>
<tr>
<td>Erythema</td>
</tr>
<tr>
<td>Hypopigmentation</td>
</tr>
<tr>
<td>Hyperpigmentation</td>
</tr>
<tr>
<td>Desquamation</td>
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<tr>
<td>Surface</td>
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0-without; 1-mild; 2-moderate; 3-severe
surface: 1<10%; 2>10%<20%; 3>20%

0, 15, th 22. nd day
The total score was computed on 0-th, 15-th and 22-nd day, and on the 7-th day after the passed therapy. The mycological efficacy has been followed on 0-th, 15-th and 22-nd day.

RESULTS

The results of the investigations showed that after two weeks of the fluconazole applications negative mycological findings were achieved in 92,11% patients. After 7 days this percentage increased to 94,74%. As for the clinical healings, after two weeks, the total score of diseases decreased for 64,96% and after three weeks for 94,74% (Graphics 1 and 2).

Graphic 1. The mycological efficacy

Graphic 2. The clinical efficacy
The complete healing was achieved in 86.84% patients, the clinical without micological healing in 5.26%, and the mycological without clinical healing in 7.89% patients (Table 2).

Table 2. The rate of healings

<table>
<thead>
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<th>The rate of healings</th>
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<td>COMPLETE-33 (86.84%) patients</td>
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| CLINICAL WITHOUT MYCOLOGICAL-2 (5.26%) patients |

| MYCOLOGICAL WITHOUT CLINICAL-3 (7.89%) patients |

The undesirable effects of the drug applications weren’t noted in any patient.

**DISCUSSION**

As the causes of PV, the yeasts were recognized in 1874. (3). Malassezz described its presence in the corneal layer of skin as the oval and spheric cells into bud. Bailon named it *Malassezia furfur*, and Castellani, who first succeeded its cultivation, registered the term *Pityrosporon ovale*. In 1996. 7 distinct species were recognized, and 6 primarily were isolated from human skin (4) (Picture 1). It is only *Malassezia pachydermatis* obligatory to be lipophilic, and it was isolated primarily in animals, rarely in humans.

In the light of the recent cognitions about variety of *Malassezia* species and the passed investigation in the last five years, the most frequent causes of PV are *Malassezia furfur*, *Malassezia globosa* and *Malassezia sympodialis*.

The therapy of diseases could be passed as local and systemic, specific and nonspecific. Whereby the disease often recurrences after the passed therapy, that it was based until last mainly on the local application of antymycotic drugs, there were the attempts of its systemic using. It was shown that the systemic using of these drugs is more effective and that they should be given during short period. Today it is recommended itrakonazole and flukonazole of the systemic antymycotics in the therapy of PV. Griseofulvine isn’t effective given perorally as well as terbinafine, that is effective in the form of the local preparations (the form of creams, gels and solutions). Ketokonazole isn’t recommended because of the hepatotoxic acting of drugs. The systemic antymycotics are recommended for the prevailing and recurred infections, nevert-
Nevertheless the clinicians makes the choice of oral antimycotics that are able to eradicate funguses in optimal dose, well passable and safe for using.

We decide to assess the efficacy and the safety of flukonazole in this study by the outset of the flukonazole pharmacodynamic profiles and of facts that it progresses the multiple higher concentration in the skin than in the plasma, and the concentration higher of the minimal inhibitory concentration for the majority of dermatophytes and non-dermatophytes causing the fungal diseases in human kind.

The administration of flukonazole in the therapy of PV hitherto has shown the excellent therapeutic results with regime of 300 mg weekly during two weeks. The results of the previous investigations confirmed the high rate of the mycological and clinical healing, in the range 80—98% for the mycological healing and 91—98% for the clinical healing, which is in accordance with the results of our investigations (5, 6). The fact of the increased rates of the clinical and mycological healing 7 days after the passed therapy could be explained by the pharmacodynamic profile of drugs and its presence in the skin 10 days after withdrawal of therapies.

In this study settings weren’t the undesirable actions, though it is well known that flukonazole causes in 6% cases the undesirable actions.

**CONCLUSION**

It could be said with full right in the conclusion that the therapeutic regime of flukonazole’s of 300 mg weekly during two weeks is effective, elegant and safe and that it is the pharmacodynamic rational regime of the therapies *Pityriasis versicolor.*
LITERATURE


ФЛУКОНАЗОЛ У ЛЕЧЕЊУ PITYRIASIS VERSICOLOR

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Резиме

Автори износе резултате системске примене флуконазола у лечењу Pityriasis versicolor. Укупно је обрађено 38 болесника, 18 жене и 20 мушкараца. Дијагноза болести постављена је на основу клиничког прегледа, нативног миколошког прегледа и применом Wood-ове лампе. Терапија је спровођена применом 300 mg флуконазола у једној дози, једампут недељно, 2 недеље. Период праћења износио је недељу дана након спроведене терапије. Терапијска ефикасност процењивана је са аспекта клиничког и миколошког излетења. Клиничка ефикасност процењивана је семиквантитативно на основу процентуалног смањења тоталног скора болести који је израчunan сабирањем нумеричких вредности за поједине клиничке параметре карактеристичне за болест, а миколошка ефикасност на основу миколошког налаза и налаза флуоресценције након осветљавања Wood-овом лампом. Контролни прегледи вршени су 0, 14. и 22. дана. Резултати исхранивања показали су да је након две недеље терапије комплетно клиничко излечење постигнуто у 94,74%, а миколошко у 92,11% болесника. Након недељу дана праћења стопа миколошког излечења се после изједначиласа стопом клиничког излечења и износила је такође 94,74%. Нежељених дејстава примене лека није било ни код једног болесника.