



## CURRENT APPROACHES TO MANAGING MICROSPORIA PATIENTS

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**Annotation:** Microsporia is a widespread contagious fungal infection that impacts human skin, hair and its appendages, in addition to animal hair and skin. While it was once predominantly found in children under 14 years old around 20-30 years ago, recent studies have indicated that it is being increasingly detected within families, affecting adults of all ages, including the elderly. There have also been numerous publications on the occurrence of the disease in adults with smooth, vellus, and long hair, with an increased incidence of infiltrative suppurative microsporia on the scalp.

**Keywords:** microsporia, treatment

**Introductions:** In Republic Uzbekistan, To unfortunately traditionally, more co times THE USSR, a relatively high incidence of scabies is revealed (more than 35-48 cases per 100thousand people). And in the last 5 years (2019-2023 ) , the incidence of microsporia in Republic Uzbekistan remained on relatively high level: V 2019 G - 41.3cases / 100 thousand population, in 2020 - 45.0, in 2021 - 48.0, in 2022 - 40.5 and in 2023 38.6 cases / 100 thousand population. Experience of mycological laboratories Uzbekistan shows that currently in patients with microsporia of the scalp And smooth skin sown only *M. lanosum* (*M. canis* ). So, V mycological laboratory was received 923 culture *M. lanosum* at survey 771 a patient with microsporia (including all patients upon admission). We agree with V.M. Rukavishnikova (2001) that the fluffy microsporum has become a kind of

cosmopolitan mushroom, practically the only pathogen zoophilic microsporia on Eurasian continent.

Drug choice For treatment microsporia many years was griseofulvin (in many developed countries it still remains so). However, in the last 10 years in the treatment of patients with microsporia began to widely use new systemic antimycotics - terbinafine and itraconazole [1-5]. Because in the Republic Uzbekistan in the last 3 years, griseofulvin practically does not enter the pharmacy network we were also forced to switch to the treatment of patients microsporia preparations terbinafine (itraconazole preparations for children under 12 years of age, the Pharmacopoeia of the Republic of Belarus does not recommend apply).

We compared the incidence of microsporia in different months of the year. IN period With 2019 G. By 2023 G. amplitude monthly hesitation incidence microsporia were very similar That's why we considered possible summarize by months these results for 5 years.

Table 1. The number of cases of microsporia in 2019-2023 at grouping by months

| Jan-<br>var | Feb -<br>ral | Marc<br>h | Ap-<br>relay | May | June | July | Av -<br>thick | Saint-<br>Octob<br>er | OK-<br>Octob<br>er | But-<br>Nove<br>mber | De-<br>Dece<br>mber |
|-------------|--------------|-----------|--------------|-----|------|------|---------------|-----------------------|--------------------|----------------------|---------------------|
| 162         | 140          | 61        | 64           | 70  | 60   | 70   | 204           | 556                   | 490                | 294                  | 248                 |
| 363         |              |           | 194          |     |      | 830  |               |                       | 1032               |                      |                     |

Least incidence microsporia V recent 5 years was registered in March-July, and in August-September there was a pronounced increase registration cases microsporia With subsequent gradual decline this indicator With October By February. Observed seasonality epidemic process is due to the seasonality of the microsporia epizootic among cats (the main source of infection), as well as seasonal migration of the population, when in August-September children are returning V city And look

around parents And health workers at their admission to schools and kindergartens. Sources of infection of patients with microsporia were detected in 98.0-99.5% of cases. Kittens predominated among the sources of infection. (more than 91.5% on average), cases of infection with zoophilic microsporia from others sick (up to 4.7 % V separate years).

**Aim:** present research is conducting comparative estimates clinical efficiency And economic costs at use methodologies treatment microsporia smooth skin, hairy parts heads And combined mycotic defeat hairy parts heads And smooth skin griseofulvin And drugs terbinafine ( lamisil , lamiter , exifin , terbizil ).

**Materials and methods:** In total, 272 patients with microsporia aged 2 years and over were under observation. up to 44 years, of which 144 (52.9%) are male and 128 (47.1%) are female. Aged before 4 years was 14.3 % sick, 5-7 years - 22.8 %, 8-14 years - 51.7 %, 15 - 18 years - 5.5 %, older 18 years - 5.7 %.

Microsporia of the smooth skin of the trunk and extremities was diagnosed in 70 patients, including 8 adults. Microsporia was diagnosed in 117 patients scalp, and in 85 - a combined lesion with fluffy microsporum hairy parts heads And smooth skin, V volume including at 3 patients including 1 adult patient, there was infiltrative suppurative form of microsporia At all sick before treatment clinical diagnosis was confirmed laboratory (microscopically in 100%, mushroom culture microsporum lanosum was obtained from 98.7 % patients).

The number of foci on the scalp was as follows: 1 foci in 51.8%, 2 foci - in 30.1%, 3-4 foci - in 8.2%, 5 or more foci - in 9.9% of patients; on smooth skin, respectively, up to 3 foci were in 23.5%, 4-5 foci - in 12.8%, 6-10 foci - in 15.7 %, up to 20 foci - at 28.3%, over 20 foci - at 19.7 %.

Griseofulvin appointed By classical three-stage scheme. First 2-4week (until the first negative fungal test) the drug was administered daily from calculation of 22 mg / kg of body weight per day (daily dose was taken in three divided doses ). After the

first negative analysis, the drug in the same dose was administered every other day, and after three consecutive negative tests (tests were performed 1 time in 5-7 days) griseofulvin V complete daily dose appointed 2 times V week more 2 weeks.

Terbinafine preparations were prescribed according to the classical method (it is recommended specialists from firms Novartis , \_ developed branded a drug terbinafine - lamisil ) at the rate of : children weighing up to 20 kg received 1 time per day 62.5 mg, with a body weight of 20 to 40 kg - 125 mg, over 40 kg - 250 mg; patients with massive lesions of the scalp and smooth skin received drugs terbinafine according to the method of Professor N.N. Potekaev from the calculation : children up to 20 kg - 94 mg, from 20 to 40 kg - 187 mg, and over 40 kg - 250 mg.

Therapy systemic antimycotics was carried out on background generally accepted external therapy (shaving and shampooing 2 times a week, 2-5% iodine tincture and fungicidal ointments). If within 3.5-5 weeks of treatment with terbinafine the results microscopic research on mushrooms were stable positive majority children translated With classical methods treatment on methodology treatment professors N.N.Potekaeva With 1.5 times increase daily doses terbinafine [ 5 ].

The criteria for the effectiveness of treatment were the rate of clinical resolution. foci defeat, terms registration first And third contract negative results microscopic research hemp broken off hair V outbreaks defeat.

**Results and discussion:** For the treatment of patients with microsporia of smooth skin along with external therapy appointed systemic antimycotics : 6 sick - lamisil , 27- exifin , 37 - lamiter . On background treatment lamisil first negative analysis on Availability mycelium of the fungus in skin flakes and vellus hair was obtained at  $13.6 \pm 2.1$  days, and the third negative analysis - at  $23.2 \pm 2.4$  days. In patients treated with exifin , these figures were  $14.7 \pm 2.0$  and  $24.4 \pm 2.1$  days, respectively , and those who received lamiter -  $15.7 \pm 2.3$  and  $25.8 \pm 2.7$  days. Thus, the treatment of patients with microsporia smooth skin With using tested systemic antimycotics

terbinafine lasts an average of 3.5 weeks, results are somewhat preferable at use lamisila , on differences statistically Not reliable ( $P>0.1-0.5$ ).

The results of microscopic examination of hair stumps for fungi in the process treatment of patients with microsporia of the scalp and combined lesions scalp and smooth skin of the trunk and extremities are reflected in the table 2.

Table 2. Dynamics mycological cure microsporia hairy partsheads at use various systemic antimycotics

| Systemic<br>antimycotic | Negative results of microscopic examination<br>mushrooms hemp hair V process treatment (V days) |                                 |                                 |                               |                               |                               |
|-------------------------|-------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                         | microsporia pilaris                                                                             |                                 |                                 | combined defeat h/h heads And |                               |                               |
|                         | parts heads                                                                                     |                                 |                                 | smooth skin                   |                               |                               |
|                         | n                                                                                               | first<br>negative _<br>analysis | third<br>negative _<br>analysis | n                             | first<br>negative<br>analysis | third<br>negative<br>analysis |
| Griseofulvin            | 60                                                                                              | 24.7+ _ 4.4                     | 35.0+ _ 3.5                     | 47                            | 25.1+ _ 4.8                   | 34.4+ _ 5.9                   |
| Lamisil                 | 10                                                                                              | 22.0+ _ 3.2                     | 32.2+ _ 4.0                     | 8                             | 19.1+ _ 2.6                   | 32.3+ _ 3.6                   |
| Lamiter                 | 20                                                                                              | 23.8+ _ 5.7                     | 34.4+ _ 6.6                     | 12                            | 27.1+ _ 4.9                   | 38.3+ _ 5.2                   |
| Exifin                  | 16                                                                                              | 26.1+ _ 3.5                     | 37.3+ _ 3.6                     | 9                             | 26.7+ _ 5.0                   | 36.2+ _ 6.1                   |
| Terbizil                | elev<br>en                                                                                      | 26.8+ _ 4.5                     | 38.2+ _ 5.1                     | 9                             | 27.5+ _ 4.3                   | 40.1+ _ 5.3                   |

As can be seen from the table, the terms of negative microscopic analyzes for fungi in stumps broken off hair at microscopy hairy parts heads And at combined damage to the scalp and smooth skin when using griseofulvina And drugs terbinafine comparable differences statistically unreliable. Comparison of the terms of microbiological treatment of microsporia with damage to the scalp, as well as the scalp and smooth skin torso And limbs various drugs terbinafine showed What

branded a drug lamisil accelerated microbiological cure V average on 2-8 days By comparison With generics . However these differences were outside statistical validity or due to the analysis of small comparison groups, or due to big scatter data V compared ranks. Elongation timing negativity microscopic analyzes on mushrooms at patients With combined damage to the scalp and smooth skin in the treatment with lamiter and terbizil may have been associated with a belated transition to the methodology of N.N. long absence speakers V clinical And microbiological cure mycotic process. So, in one of our observations (boy G., 6 years old with a weight body 22 kg) treatment was started lamiter By classical scheme, V connections With no negative results for fungi he was transferred on the 27th day to treatment with exifin at the same dose, on the 40th day of treatment, the dose was increased to 187.5 mg, and third contract negative analysis on mushrooms was received only on 89th day treatment, i.e. at week 13 of treatment. Probably in this case there was a decrease sensitivity pathogen to drugs terbinafine .

Portability drugs V in general was good. Side effects phenomena V form mild diarrheal syndrome occurred in 2 cases (1 at the end of the first week treatment lamiter , 2nd - on second week treatment terbizil ), But They Not demanded that the drug be discontinued.

So the way clinical And mycological permission foci on smooth skin in the treatment of terbinafine and griseofulvin drugs occurred on average behind 3.5 weeks A microsporia hairy parts heads demanded at majority patients at least 5.5 - 7 weeks of systemic and local therapy. Similar terms indicate and others researchers [1-5].

We have calculated the average cost of the drug for the course of treatment of the patient microsporia. In the treatment with griseofulvin, the cost of the drug for a course of treatment patient with microsporia of the scalp amounted to 43 - 66 thousand rubles, and with a combined lesion of the scalp and smooth skin - 45 - 65 thousand rubles; when using lamisil - respectively 122 - 146 thousand rubles and

130 - 156 thousand rubles; when using a lamiter - 48 - 62 thousand and 50 - 60 thousand rubles; at treatment exifin - 54 - 71 thousand And 58 - 70 thousand rubles; A at treatment terbizil – 62 - 77 thousand And 65- 83 thousands rubles.

**Conclusions:** So the way drugs terbinafine may be recommended For treatment microsporia at children And adults on background absence V pharmacy networks griseofulvin .WITH clinical points vision the best results received at uselamisila . WITH pharmacoeconomic points vision most preferred is the treatment of microsporia using lamiter . However, the extension timing stationary treatment children at use generics terbinafine requires further improvement methodologies treatment microsporia, approbation new drugs and methods of external therapy, the development of methods for outpatient treatment these patients.

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