Experience of using griseofulvin in the child below 1 year of age with tinea capitis.

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Summary

A 4-month-old girl with tinea capitis caused by Microsporum canis was reported. The source of infection was not established. Taking into account the age of the patient, we decided to treat only topically the disease. The local treatment conducted for a month proved to be ineffective. Therefore, we decided with the pediatrician to use oral griseofulvin at a dose of 22 mg/kg per day. By the end of the first month of treatment with griseofulvin the clinical picture regressed.

Key words

Griseofulvin, infant.

Tinea capitis is the most common mycosis in children. The incidence of tinea capitis caused by Microsporum spp. among children below 14 years was 229.1 per 100,000 children population in 2011 in the Russian Federation. The highest incidence is in the age from 2 till 7 years. The most common causative agent in Russia is zoophilous M. canis; M. audouinii, M. ferrugineum and geophilous M. gypseum are much more rare. The diagnosis is based on clinical and laboratory data (microscopy of skin scales and hair and cultural studies).

In case of involvement of hairless skin the treatment include different topical antifungal agents; on the other hand, in the case of involvement of skin appendages in the pathological process the systemic antifungal drugs should be appointed. Griseofulvin is the best medicine with fungistatic activity.

Case report

A 4-month-old child presented with skin lesions on the scalp for 1.5 weeks. On physical examination a 3.5 x 2.5 cm erythematous patch was found on the border of the right fronto-parietal region, with raised crusts on the periphery and with typical green fluorescence under Wood’s lamp (Fig. 1 and box). On direct microscopy skin scales contained hyphae and arthrospores, the hair spores and threads of mycelium within the hair shaft. The cultural study revealed M. canis.

The source of infection was not established. Taking into account the age, it was decided to treat only topically - alcohale iodine and clotrimazole ointment 2% in combination with shaving and hair removal.

The local treatment conducted for a month proved to be ineffective. The typical green fluorescence under Wood’s lamp maintained and mycological tests were positive. Together with the pediatrician it was decided to conduct treatment with griseofulvin in a dose of 22 mg/kg per day.

The clinical analysis of blood, urine analysis, biochemical blood tests and liver function tests (bilirubin, ALT, AST) were carried out before the administration of treatment. The tolerability was good. The laboratory tests were repeated.
Experience of using griseofulvin in the child

Fig. 1 and box: A 4-month-old child with tinea capitis due to *M. Canis*. Erythematous patch of the scalp with peripheral scales and crusts.

every 10 days. By the end of the first month of treatment with griseofulvin the clinical picture regressed. The typical green fluorescence under Wood’s lamp disappeared, the mycological tests were negative.

**Discussion**

The standard for treatment of tinea capitis in children below 1 year of age has not been developed. In some cases the treatment includes only topical antifungal therapy, which are associated with higher level of safety as compared with systemic antifungal agents but ineffective.

The literature contains descriptions of cases of successful treatment of tinea capitis in newborns with fluconazole 5mg/kg per day for 15 days (3). Aste et Al. used terbinafine 62.5 mg per day for 4 weeks in a child aged 40 days (1). The combined use of 2% ketoconazole shampoo and griseofulvin in a daily dose of 15 mg / kg for 8 weeks was effective in a 4-month-old baby (2).

In conclusion, tinea capitis of the scalp in infants is a very rare disease. The topical antifungal agents are ineffective in the management of tinea capitis.

The administration of systemic antifungal drugs should be done through the shared decision of dermatologist and pediatrician under clinical and laboratory supervision.

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