

Pustular Tinea Cutis

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Introduction: Tinea corporis is a fungal skin infection caused by a group of fungi known as Dermatophytes. Microsporum species causes numerous forms of the disease – itching, rash and nail discoloration are the most common symptoms. Infection is limited to the dead layers of the skin but predisposed by moist and warm environment¹. Nevertheless mostly known as ringworm in pets, it may also infect humans². Reactions to a dermatophyte infection may range from mild to severe as a consequence of the host's reactions to the metabolic products of the fungus, the virulence of the infecting stain or species, the anatomic location of the infection, and local environmental factors³.

Case report: A 16-year-old female presented with 3 months history of enlarging polymorphic erythematous, papulopustular skin lesions with itching and burning on the neck, chest, trunk, upper and lower extremities (**Fig.1A, B**). There was no involvement of the nails. Eight weeks before, the patient was treated by a General Practitioner (GP) with systemic and topical steroids (28 days), antihistamines (14 days) and topical antibiotics (10 days). Certain tests included – histological evaluation of the skin biopsy, which showed epidermal acanthosis, parakeratosis, superficial perivascular infiltration with lymphocytes and histiocytes. Fungus like structures, eosinophilic infiltrates, granulomas were not found. Skin culture for pathological microorganisms was negative. As the patient's skin condition worsened, she was admitted to our department. Additional anamnestic data revealed that 1 month before the skin rash two hamsters were purchased by the family. Also, patient's mother developed the similar rash on her chest several weeks before. The repeated skin culture confirmed Microsporum species. The histological evaluation of the affected skin showed PAS positive hyphae like structures in the stratum corneum (**Fig. 2A, B**). The patient was treated with naftifine 10 mg/g cream once a day and oral itraconazole 200 mg per day for 8 weeks. Throughout the treatment patient's skin condition improved – only hiperpigmented macules around the hair follicles were seen (**Fig.1C, D**). In addition, liver enzymes – alanine transaminase and aspartate transaminase were monitored throughout the treatment and stayed within normal limits. The home pets were treated with antimycotic drugs in veterinary clinic. The patient's mother was administered with topical naftifine 10 mg/g cream twice a day for 4 weeks.

Conclusions: Based on the literature [4] it is recommended to perform microscopic examination of the affected skin and hair follicle for fungi structure after 4 weeks and at the end of the treatment. In our case this was not done because we achieved good clinical outcomes after performed treatment.



Fig. 1A – Clinical examination before the treatment

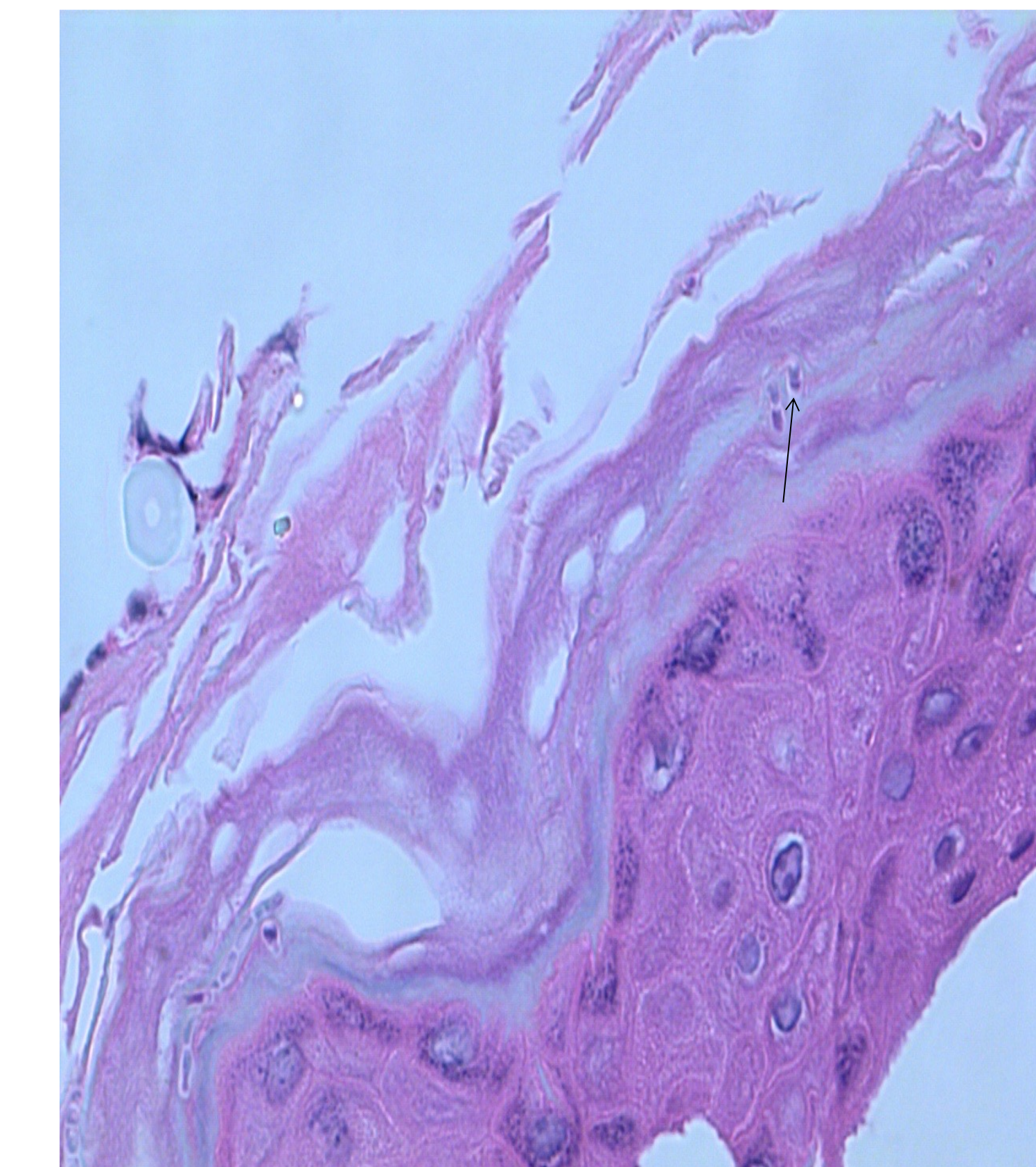


Fig. 2A – Histological evaluation of the skin (HE x 400 magnification)



Fig. 1C – Clinical examination after the treatment

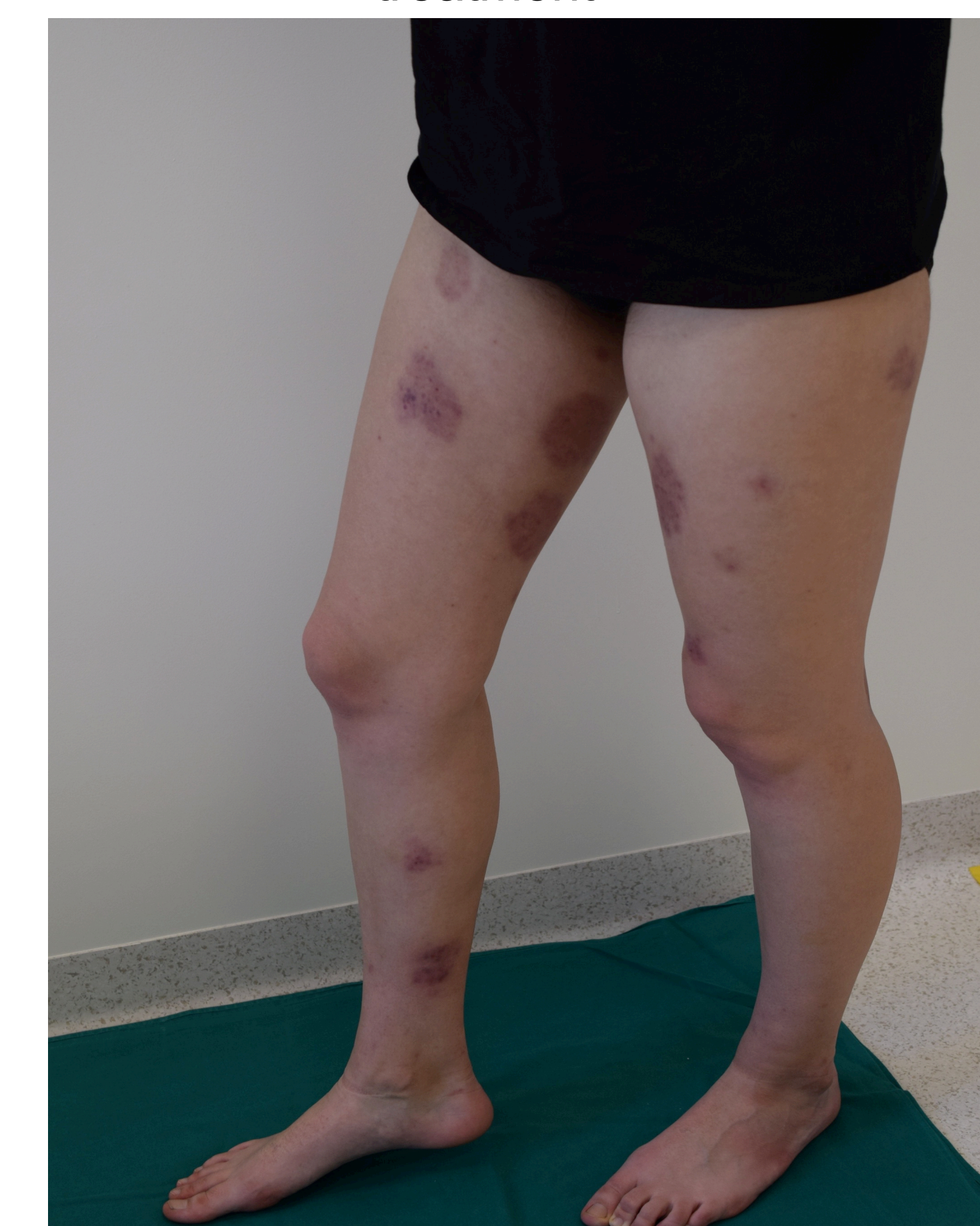


Fig. 1B – Clinical examination before the treatment

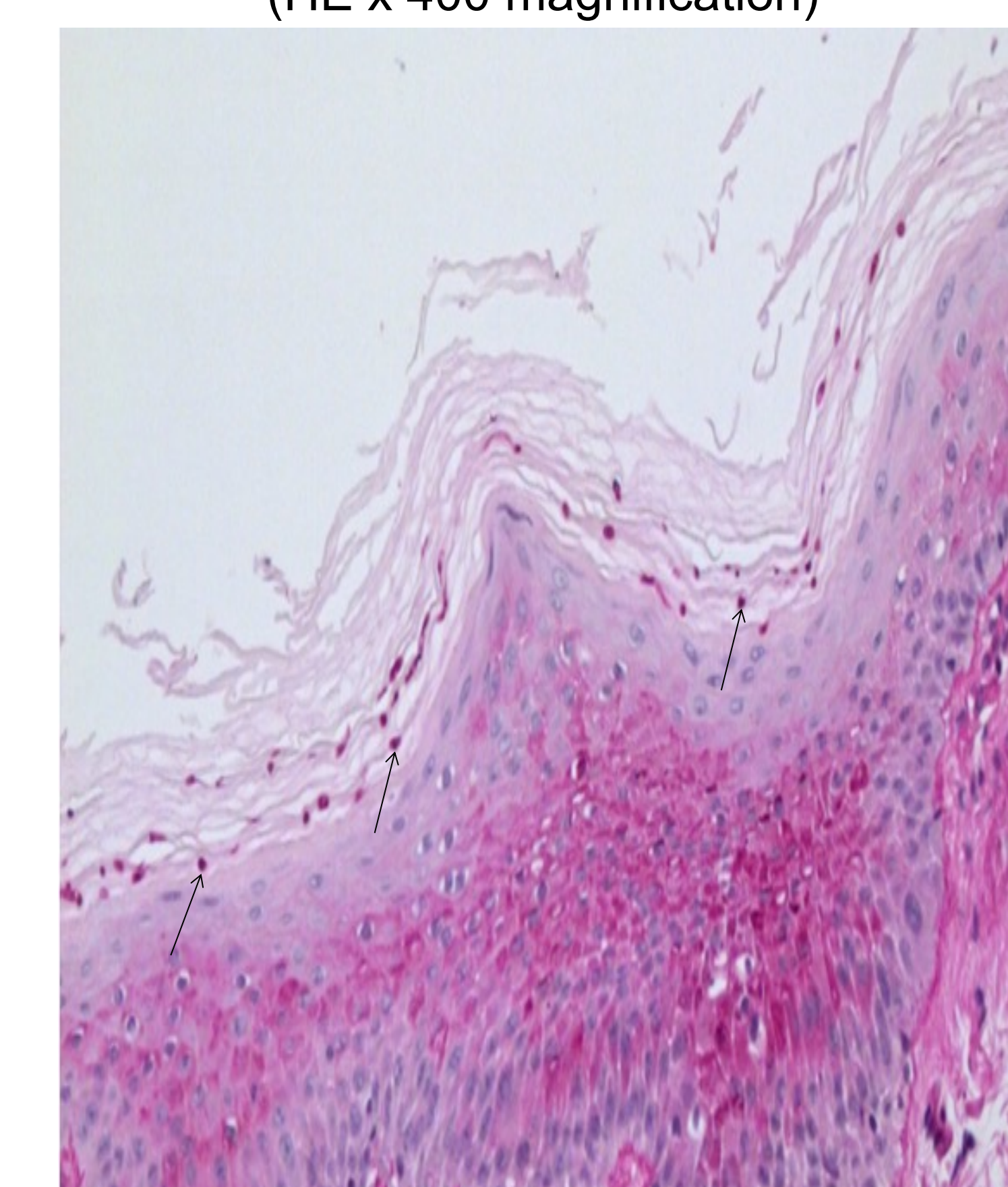


Fig. 2B – Histochemical examination with PAS (x 100 magnification)

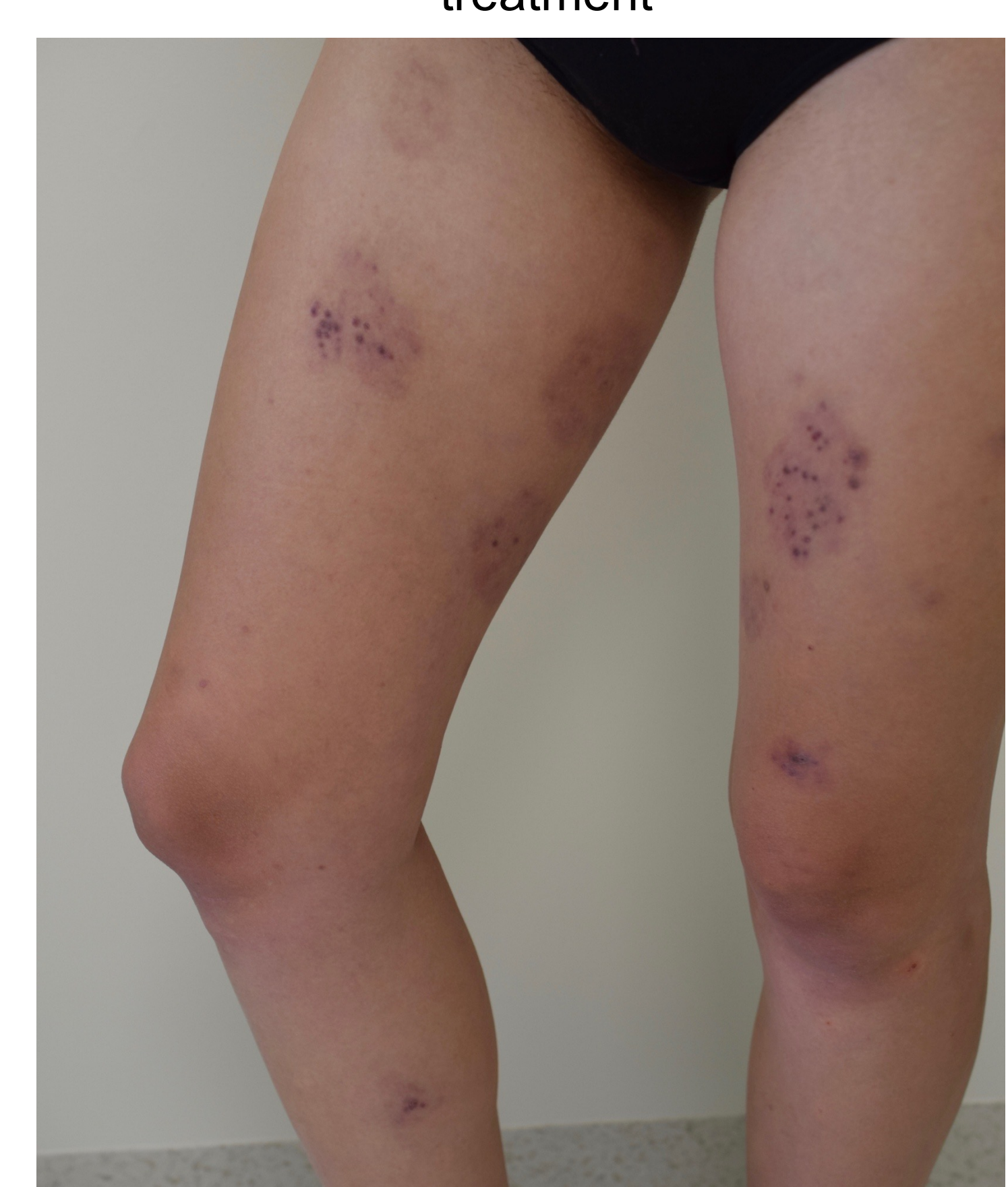


Fig. 1D – Clinical examination after the treatment

References: 1. Nenoff P et al. Mycology – an update part 2: Dermatomycoses: clinical picture and diagnostics. JDDG 2014, p. 749-777.

2. Moriarty B et al. The diagnosis and management of tinea. BMJ 2012, p. 345.

3. Kokollari F et al. Tinea corporis caused by Microsporum Canis. Med Arh 2015, 69(5): p. 345-346.

4. Nenoff P et al. Mycology – an update part 3: Dermatomycoses: topical and systemic therapy. JDDG 2015, p. 387-411.

Key words: Tinea cutis, microsporum spp., skin biopsy, itraconazole.