IMAGE QUIZ

Common condition: Uncommon presentation

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Question

A 2-year-old girl was brought to the pediatric out-patient clinic with complaints of recurrent diarrhea, poor growth and rash over the abdomen for the past few months. Examination revealed generalized lymphadenopathy, mild hepatosplenomegaly and brownish, itchy lesions over the lower abdomen extending upto the genital area (***Fig.* 1**). The child had been receiving treatment in the form of oral medications and topical agents from a local practitioner, following which the skin subsided temporarily but flared on stopping the medications. An underlying immunodeficiency was suspected and the child was detected to be reactive for human immunodeficiency virus on ELISA test. Superficial skin scrapings revealed septate hyphae on direct microscopic exami-nation of 10% potassium hydroxide (KOH) mount. What is the likely skin condition?

For answer see Page 47.

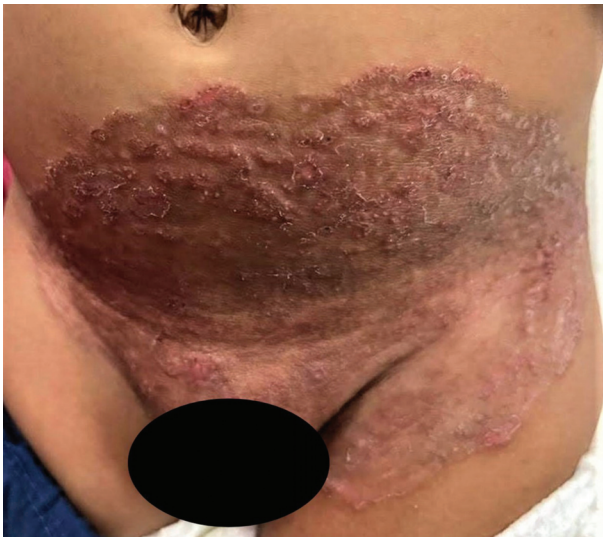

Fig 1: Extensive hyperpigmented, scaly plaque involving the lower abdomen and external genitalia, along with the medial aspect of thigh in a young child. Multiple areas of "ring within a ring" appearance (left outer aspect of thigh) and "double-edged scale" (right lower abdomen) can be seen, apart from the typical peripheral scale. Few pustules are also identifiable within the plaque.

2021;27(2):301-309. doi: 10.1038/s41591-020-01188-3
8. Chalabi M, Fanchi LF, Dijkstra KK, *et al*. Neoadjuvant immunotherapy leads to pathological responses in MMR-proficient and MMR-deficient early-stage colon cancers. *Nat Med*. 2020; 26(4):566-576. doi: 10.1038/s41591-020-0805-8
9. Hu H, Kang L, Zhang J, *et al*. Neoadjuvant PD-1 blockade with toripalimab, with or without celecoxib, in mismatch repair-deficient or microsatellite instability-high, locally advanced, colorectal cancer (PICC): a single-centre, parallel-group, non-comparative, randomised, phase 2 trial. *Lancet Gastroenterol Hepatol*. 2022;7(1):38-48. doi: 10.1016/S2468-1253(21)00348-4
10. ESMO. Oncology News. High sensitivity of mismatch repair-deficient locally advanced rectal cancer to single agent PD-1 blockade. Findings from a prospective phase II study with dostarlimab. Accessed July 02, 2022. *https://www.esmo.org/oncology-news/high-sensitivity-of-mismatch-repair-deficient-locally-advanced-rectal-cancer-to-single-agent-pd1-blockade*
11. Davar D, Dzutsev AK, McCulloch JA, *et al*. Fecal microbiota transplant overcomes resistance to anti-PD-1 therapy in melanoma patients. *Science.* 2021;371(6529): 595-602. doi: 10.1126/science.abf3363
12. Cascone T, William WN Jr, Weissferdt A, *et al*. Neoadjuvant nivolumab or nivolumab plus ipilimumab in operable non-small cell lung cancer: the phase 2 randomized NEOSTAR trial. *Nat Med.* 2021;27(3):504-514. doi: 10.1038/s41591-020-01224-2

IMAGE QUIZ ANSWER

The child is suffering from a modified superficial dermatophytosis known as 'Tinea pseudoimbricata' or 'Tinea indecisiva'. It forms a subset of 'Tinea incognito', or altered tinea, where the typical features of central clearing, peripheral scaling and inflammatory border are absent or reduced. It is characterized by multiple concentric rings with variable scaling. The lesions are similar to Tinea imbricata, which is caused by *Trichophyton concentricum*. On the other hand, Tinea pseudoimbricata has been shown to be caused by multiple dermatophyte species including *Trichophyton tonsurans*, *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Microsporum audouinii* and *Microsporum gypseum*.

Tinea pseudoimbricata is a presentation seen in immunocompromised individuals and in patients with history of topical steroid abuse.[1-3] It presents with sequentially appearing concentric scaly rings, giving rise to the characteristic "ring-within-a-ring appearance".[4] A high index of clinical suspicion and direct microscopic examination of skin scrapings with KOH and fungal culture on Sabouraud's dextrose agar (SDA) are vital for the diagnosis.

The condition necessitates systemic antifungal therapy for a prolonged period of at least 6-8 weeks. The drugs recommended are terbinafine and itraconazole. Suboptimal response is expected with fluconazole or griseofulvin. The prognosis is good with adequate and prolonged treatment coupled with management of causes of immunosuppression. This is commonly in the form of topical or systemic steroid abuse, which needs to be stopped. The same was denied in our case. Other causes like HIV infection, like in our case, need to be managed adequately. At the same time, it is important to treat the family members and educate them regarding the infectious nature of the condition, the role of fomites like clothing and bedding, separate washing of infected clothes, avoidance of sharing of towels, clothes, bed linen, and soaps, and the need for good skin hygiene practices.

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REFERENCES

1. Batta K, Ramlogan D, Smith AG, *et al*. 'Tinea indecisiva' may mimic the concentric rings of tinea imbricata. *Br J Dermatol*. 2002;147:384. doi:10.1046/j.1365-2133.2002. 04767.x
2. Narang K, Pahwa M, Ramesh V. Tinea capitis in the form of concentric rings in an HIV positive adult on antiretroviral treatment. *Indian J Dermatol.* 2012;57(4):288-290. doi: 10.4103/0019-5154.97672
3. Singal A, Jakhar D, Kaur I, Pandhi D, Das S. *Tinea pseudoimbricata* as a Unique Manifestation of Steroid Abuse: A Clinico-Mycological and Dermoscopic Study from a Tertiary Care Hospital. *Indian Dermatol Online J*. 2019;10(4):422-425. doi: 10.4103/idoj.IDOJ_385_18
4. Verma S. Tinea pseudoimbricata. *Indian J Dermatol Venereol Leprol.* 2017;83:344-345. doi: 10.4103/0378-6323.187686