

Scabies Skin Infection in a Twenty Nine Years Old Male

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Abstract: Scabies is known to be a highly contagious skin infection caused by *Sarcoptes scabiei* var. *hominis* which burrow into the skin. Scabies is one of the three most common skin diseases that affect the skin besides pyoderma and tinea. In addition, scabies are more often seen in crowded district with low standard of living and unhygienic condition. Scabies can spread through direct or indirect skin contact.

Keywords: Scabies, contagious, skin.

INTRODUCTION

The most common presentations of scabies include classic burrows, pruritic papules, and inflammatory nodules, although in the crusted variant, thick hyperkeratoses with numerous mites predominate. Sometimes, secondary lesions like impetigo or folliculitis, eczematous changes or pseudolymphoma, and some atypical presentations such as urticaria, Darier's disease, dermatitis herpetiformis, and bullous pemphigoid may be seen [1,2].

CASE REPORT

A 29-year-old male presented with a five-day history of multiple blisters over both hands preceded by a one-week history of generalized pruritus to department of Dermatology.

The itching was more during night. The patient denied any history of unprotected sexual exposure.

Examination revealed multiple, erythematous excoriated papules on the wrist, trunk, lower limbs, and web spaces of fingers. Multiple tense vesicles and bullae, 0.5-1.5 cm sized, containing clear fluid were also present on the dorsum of both hands and web spaces of fingers. There were no mucosal lesions. Other cutaneous and systemic examination was unremarkable. A diagnosis of bullous scabies was

considered. Biopsy was done and sent to Pathology department for further confirmation.

Biopsy and histopathology of one of the vesicles revealed epidermal spongiosis, multilocular intraepidermal blisters, subepidermal edema with dense lymphohistiocytic infiltrate, and a few eosinophils. The blister cavity also contained inflammatory cells with eosinophils being predominant. The presence of mites within the blister cavity was also noted [Figure 1]. Based on clinicopathological correlation, a diagnosis of bullous scabies was made.

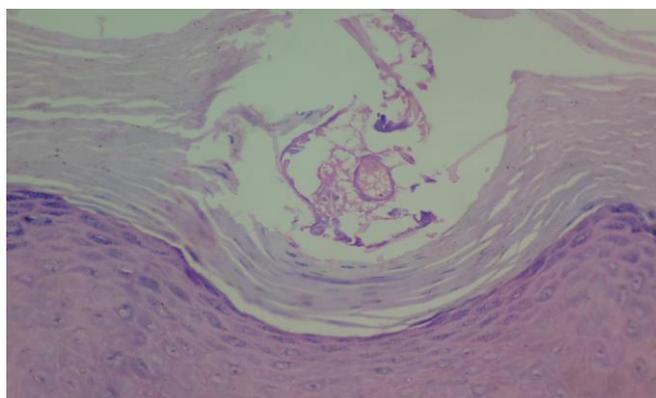


Fig-1: Section showing scabies mite (H&E x 400)

DISCUSSION

Scabies is a type of skin disease which are caused by an infestation and sensitization by *Sarcoptes scabiei* var. *hominis* and its product [1,2]. There are many factors which are contributing to this type of skin disease such as poor hygiene, poverty, and sexual contact and wrong diagnosis. The main route of transmission of this disease is by direct skin to skin contact. Take handshakes and sleeping side by side for an example [2]. Scabies also can be transmitted by indirect contact such as sharing of personal belongings. Scabies is usually spread by female *Sarcoptes scabiei* mites who reproduces and form the larvae. The life cycle of this mite from an egg evolving into adult mite takes approximately 8-12 days[2].

There are four cardinal signs which can found in scabies skin disease and can be used for diagnosis manifestation of scabies. The diagnosis can be made when two over four cardinal signs are found³. The cardinal signs are nocturnal pruritus, scabies attacks groups of people, appearance of visible tunnel in whitish to greyish colour and the gold standard diagnostic will be finding mites in the skin through microscopic examination [3].

Scabies could also be confirmed by identifying the mite or mite eggs [1, 2]. This can be done by using the tip of a needle by removing the mite carefully from the end of its burrow or by examining under a microscope for mites, eggs, or mite faecal matter from a skin scraping obtained [2, 3]. However, this method may cause pain, physical or psychological discomfort and even results in bleeding hence its rarely performed if the diagnosis can be made by rest three clear cardinal sign.

Besides, most physicians often overlooked this skin disease to be any pruritic dermatoses. Therefore, a proper history taking and an effective clinical examination should be assessed to diagnose this clinical condition comprehensively to endure patients do not self-medicate themselves that could lead to other serious medical complications in unattended or chronic use. In communities where scabies is not endemic, the index of suspicion is low, bullous scabies can be confused with vesicubullous diseases like bullous pemphigoid [3]. Moreover, missing the diagnosis of diseases like scabies can lead to an outbreak among health-care workers.

Bullous lesions over scabies-prone sites, nocturnal itching, genital involvement, detection of mite on histopathology, and response to antiscabies treatment finally confirmed the diagnosis of bullous scabies in our case.

The treatment for scabies comprises of two group of medication, which are topical and systemic medication [2, 3]. Scabimite cream contains permethrin

5% and its recommended as the first choice of topical treatment for scabies because it has less toxic compared to Gameksan but the effect of the medication is same [1,2]. The method to apply this cream is thoroughly massage the Scabimite cream into the skin from the head to soles of the feet, paying particular attention to the area between the fingers and toes, wrists, axillae, external genitalia and buttocks [3]. Then remove the cream after 8 to 10 hours [1,2]. And it is not necessary to apply a thick visible layer of cream into the skin. Permethrin works in a way by destroying polarisation of nerve cell walls of the parasite by tying it with sodium. This will prolong repolarisation of cell wall and lead to paralyse of parasite. Permethrin gets metabolised quickly on skin and the non-reactive product of metabolism will be secreted out through urine [1 2]. In addition, it is contraindicated on babies below two months old and also on a person with known hypersensitivity on any of their components [3]. Besides that, gamma benzene hexa chloride 1% lotion is also one the medications used for scabies [2]. This medication is known to be effective to all stages of scabies, one time application is sufficient in 95% and rarely creates irritation on skin but is contraindicated on children below 6 years old and pregnant mothers because it's hazardous to our central nervous system [2,3]. Benzyl Benzoate is also one of the treatments for scabies. It's effective in all stages of scabies but it's hard to obtain this lotion and at times it increases the intensities of pruritus.

Another medication for scabies is sulphur cream; this cream is not effective in egg stage of the mite. Therefore, it has to be used more than three days and it also leaves a very bad odour on clothes [2]. In this case, the patient was prescribed with Scabimite lotion because it has the highest effectiveness. Besides that, it is safe to use and also it has the least side effects compare to the other medication.

However, it's not sufficient to treat the infected person alone whereas the treatment must often involve the entire household and community to prevent reinfection [3]. Besides that, the mite also must be totally eradicated from the infected person and importantly from their environment as well to ensure they free from scabies for definite [3].

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