

**PERSONAL HYGIENE AND THE INCIDENT OF SCABIES:
COMPREHENSIVE CASE MANAGEMENT AT PHC SURABAYA HOSPITAL**

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ABSTRACT

Introduction: One of the risk factors for scabies is poor hygiene. Scabies is a skin condition caused by infestation and sensitization to the *Sarcoptes scabiei* var. *hominis* mite. While scabies can be treated, it is often diagnosed late, leading to delayed treatment and easy spread within groups.

Objective: This paper aims to present a case of scabies in a patient who contracted the infection within the school environment, emphasizing the importance of hygiene and health awareness, particularly regarding skin health, to prevent disease transmission.

Case Report: The patient presented to the Skin and Venereology Clinic at PHC Hospital with complaints of generalized itching persisting for 3 months, similar to symptoms experienced by classmates. The itching was accompanied by the presence of small ulcers. Treatment involved the application of Sulfur precipitatum Cream 10%, Krotamiton Cream 10%, and Permethrin Cream 5% once, to be left on for 8-10 hours (with a repeat application after 1 week), along with Cetirizine 10 mg.

Conclusion: After weekly evaluations over 3 months, coupled with pharmacological therapy and adherence to hygiene practices, the patient returned symptom-free and without complications.

Keyword: Personal hygiene, scabies

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INTRODUCTION

Scabies, caused by infestation and sensitization to the mite *Sarcoptes scabiei* var. *hominis* and its products, is a skin disease characterized by intense itching, often occurring at night.¹ Commonly referred to as "the itch" or "sky-bees," this condition typically affects groups of people, with a preference for thin, warm, and moist skin folds. Clinical symptoms manifest as polymorphic lesions spread across the body. Although treatable, scabies are frequently diagnosed late, leading to delayed treatment and facilitating its spread within communities. Scabies pose a significant global health concern, particularly in developing countries, where it is estimated to affect 300 million individuals annually. Epidemics of scabies are suspected to occur approximately every 30 years, with the incidence in developing countries currently showing a fluctuating trend.² According to the Indonesian Ministry of Health, the prevalence of scabies across Indonesia ranges from 5.6% to 12.95%.

Scabies is most commonly transmitted through two routes:

- 1) Direct contact: This involves prolonged or extended skin-to-skin contact with an infected individual. Examples include shaking hands, sharing bedding, engaging in sexual activity with both infected and healthy individuals, or coming into contact with animals that harbor mites, such as dogs, pigs, goats, and sheep.
- 2) Indirect contact: Transmission can also occur indirectly through contaminated objects such as clothing, towels, bed sheets, and pillows. Recent research underscores the significance of this mode of transmission and highlights blankets as a primary source of infection. In one reported case, a scabies patient contracted the infection from their school environment.

Maintaining good hygiene and promoting awareness of health, particularly skin health, are crucial to prevent the spread of the disease.

CASE REPORT

The patient presented to the Skin and Venereology Department of PHC Hospital with complaints of itching all over his body for the past 3 months. Initially, the itching was localized to the buttocks and hands, but over the last few months, it has become generalized. The patient reported that the itching seemed to come and go, with increased intensity when sweating and before bedtime. Additionally, the patient described the presence of small ulcers, each less than 0,5 cm in diameter. Some of these ulcers appeared reddish, while others had a dry, blackish-brown appearance. They were primarily located on the front

and back of the waist, buttocks, groin, hands, and thighs. The patient noted that scratching would often result in blistering and bleeding.

According to the patient and his mother, the patient frequently changes clothes, showers twice daily, and changes bed sheets weekly. The patient resides with his mother and sleeps in a separate room,

facing each other. The patient mentioned that several classmates had experienced similar symptoms before his onset of illness. He frequently socializes and plays with friends, meeting almost daily. The patient's wounds do not exhibit pus or odour, and he denies experiencing fever, body aches, or headaches.



Figure 1. Clinical Manifestation of Patient with Scabies

The patient was treated with Sulfur precipitatum cream 10%, Krotamiton cream 10%, and Permethrin cream 5%, applied once and left on for 8-10 hours (to be repeated after 1 week), along with Cetirizine 10 mg. The patient was

evaluated weekly for 3 months. Clinical improvement was observed, including a reduction in lesions and itching symptoms, with no secondary infectious complications and no reported side effects.

DISCUSSION

Scabies occur worldwide and are considered a significant health problem, particularly in developing countries, with an estimated incidence of 300 million cases each year. It is suspected that there will be a scabies epidemic every 30 years. The incidence of scabies in developing countries is currently experiencing fluctuating cycles.

Sarcoptes scabiei belongs to the phylum Arthropoda, class Arachnida, order Acarina, and superfamily Sarcoptes. It was discovered by biologist Diacinto Cestoni (1637-1718). In humans, it is known as *Sarcoptes scabiei* var. *hominis*. Additionally, other species of *S. scabiei* exist, such as those found in goats and pigs.

Scabies is most commonly transmitted through:

- 1) Direct contact involves prolonged skin-to-skin contact with an affected individual. Examples include shaking hands, sharing sleeping quarters, engaging in sexual activity with both infected and uninfected individuals, or coming into contact with animals carrying mites, such as dogs, pigs, goats, and sheep.
- 2) Indirect contact occurs through contact with contaminated objects, such as clothing, towels, bed sheets, pillows, and other items. Recent research highlights the significant role of indirect transmission in scabies,

suggesting that blankets are the primary source of infection.

Transmission usually occurs through fertilized female *Sarcoptes scabiei*, or sometimes in the larval form. It is also known as *Sarcoptes scabiei* var. *animalis*, which can occasionally infect humans, particularly individuals who keep many pets, such as dogs.

Scabies transmission occurs when female mites penetrate the skin and enter the epidermis. Fertilized female mites then burrow into the stratum corneum, where they lay 0-4 eggs per day for up to two months. The excretions from these mites cause itching, which intensifies at night due to increased mite activity in warmer and more humid conditions^{3,4}. However, less than 10% of these eggs will mature into adult mites. The entire life cycle, from egg to adult, lasts about two weeks. After reaching adulthood, the mite leaves the burrow, surfaces on the skin, and the life cycle repeats.¹

Patients are advised to maintain cleanliness and bathe regularly every day. All clothing, bedding, and towels used must be regularly washed and, if necessary, soaked in hot water. Similarly, family members at high risk of infection, especially infants and children, should also maintain cleanliness and temporarily avoid direct contact.

In general, improving environmental and personal hygiene and enhancing nutritional status are recommended. Several treatment conditions must be considered:

- 1) All family members must undergo examination and receive treatment simultaneously.
- 2) Personal hygiene: Affected individuals should take a thorough shower and, if necessary, use a brush to scrub their body. After bathing, the clothes to be worn should be ironed.
- 3) All household items such as benches, sofas, bed sheets, pillows, mattresses, and blankets must be cleaned and dried in the sun for several hours.

Individuals diagnosed with scabies should receive treatment, as should those closest to them who frequently come into contact with the affected individual, to prevent mite re-infestation. If family or household members are advised to undergo treatment, all should do so simultaneously to prevent mite re-infestation. Other ways to prevent scabies include⁵:

- 1) Bathing regularly with soap and keeping hands clean.
- 2) Avoiding interchangeable clothes and towels.
- 3) Using personal sleeping equipment and avoiding sharing it with others.
- 4) Washing personal items that come into direct contact with skin within 48

hours after use by multiple people, soaking them in hot water, and drying them in the sun. Additionally, washing clothes, bed sheets, pillowcases, blankets, and other items regularly at least twice a week.

- 5) Sealing and storing unwashable items for approximately one week, as mites cannot survive without human skin contact for 1-4 days.
- 6) Refraining from having sexual relations with an affected individual until successful completion of scabies treatment.
- 7) Maintaining a clean and well-ventilated living environment.

When someone is suspected of having scabies, an immediate search is conducted to identify additional cases⁶.

In this case, personal hygiene emerges as a major factor contributing to the onset of scabies. Personal hygiene significantly influences an individual's health status. Practices to uphold health include maintaining clean skin, regularly washing hands and nails, changing clothes frequently, avoiding sharing towels, and regularly changing bed sheets^{7,8}. Several pieces of literature indicate a correlation between personal hygiene and the incidence of scabies. Personal hygiene serves as both a risk factor for and a preventive measure against scabies.

Improved personal hygiene increases the risk of transmission^{9,10}.

The primary modes of scabies transmission are direct and indirect contact. Indirect transmission can occur through items such as towels, bedding, and bed linen. Infestation by *Sarcoptes scabiei* mites can also result from infrequent clothing changes or borrowing clothes, facilitating the spread of scabies indirectly. Such practices can lead to skin-related health issues due to moisture buildup in the body. Therefore, it is imperative to change into clean clothes daily^{11,12}.

CONCLUSION

After weekly evaluations over 3 months, along with pharmacological therapy and adherence to hygiene practices, the patient returned without experiencing any symptoms or complications.

REFERENCES

1. Shimose L, Munoz-Price LS. 2013. *Diagnosis, prevention, and treatment of scabies*. *Curr Infect Dis Rep*. p;15(5):426-431. doi:10.1007/s11908-013-0354-0.
2. Handoko RP. Scabies. Dalam Djuanda A., Hamzah M., Aisah S (Ed). 2015. *Ilmu Penyakit Kulit dan Kelamin. Edisi Ketujuh (Cetakan Pertama)*. Fakultas Kedokteran UI. Jakarta, p: 137-140.
3. Department of Public Health Division of communicable disease control. *Scabies*. 2010. <https://www.cdc.gov/parasites/scabies/index.html> (Diakses 18 April 2018, pukul 18.30 WIB).
4. Health georgia department of public. 2011. *Scabies Handbook*.
5. Infection Control Branch. 2009. *Section 10 : Extended Care Service Scabies Management*. Infect Control.
6. Sungkar S, 2003. Penyakit yang Disebabkan Artropoda, dalam Srirasi G., H. Herry D., dan Wita Pribadi (Ed). *Parasitologi Kedokteran. Edisi III*. Fakultas Kedokteran UI Jakarta, p:264-267
7. Adnani, H. (2011). Ilmu Kesehatan Masyarakat. Nuha Medika. Yogyakarta.
8. Andayani, L. (2005). Perilaku Santri Dalam Upaya Pencegahan Penyakit Skabies di Pondok Pesantren Ulumu Qur'an stabat. Fakultas Kesehatan Masyarakat : Universitas Sumatra Utara, Medan.
9. Audhah, N. A., Umniyati, S. R., & Siswati, A. S. (2012). Faktor Resiko Skabies Pada Siswa Pondok Pesantren. *Jurnal Buski*. 4(1).
10. Badri, M. (2008). Hygiene Perseorangan Santri Pondok Pesantren Wali Songo Ngabrar Ponorogo. *Media Penelitian dan Pengembangan Kesehatan*. Vol 17, No 2, Hal. 2.

11. Baker, F. (2010). Scabies Management. *Paediatr Child Health*. 6:775-7
12. Heukelbach, J., & Feldmeier, H. (2006). Scabies, *Lancet*. 367 : 1767 – 1774.