

## SCABIES MIMICING CHILD ABUSE – A CASE REPORT

Anita Gunarić<sup>1</sup>, Kristina Jurišić<sup>1</sup>, Dubravka Šimić<sup>1,2</sup>, Jasna Zeljko Penavić<sup>1,2</sup>,  
Sandra Jozić<sup>2</sup> & Ivana Goluža<sup>2</sup>

<sup>1</sup>Department of Dermatology and Venereology, University Clinical Hospital Mostar, Mostar, Bosnia and Herzegovina

<sup>2</sup>School of Health Studies University of Mostar, Mostar, Bosnia and Herzegovina

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### INTRODUCTION

Scabies is an infestation of the skin by the mite *Sarcoptes scabiei* var. *hominis* that results in an intensely pruritic eruption with a characteristic distribution pattern. The estimated prevalence ranges from 0.2 to 71 percent, with as many as 100 million people affected worldwide (Romani 2015). Transmission of scabies is usually from person to person by direct contact, by wearing or handling heavily contaminated clothing, or by sleeping in an unchanged bed recently occupied by an infested individual. Transmission from parents to children, and especially from mother to infant, is routine. Schools do not ordinarily provide the level of contact necessary for transmission. In young adults, the mode of transmission is usually sexual contact (Fuller 2013, Chosidow 2006, Heukelbach 2006). The essential lesion is a small, erythematous, nondescript papule, often excoriated and tipped with hemorrhagic crusts (Pomares 2014, Eshagh 2014). In other cases scabies can present with unusual forms (e.g. vesicular, bullous, nodular, crusted, urticarial) which can make diagnosis difficult even for experienced dermatologist (Orkin 1985). The diagnosis of scabies is generally made from the history and the distribution of lesions, as well as the skin scraping, dermoscopy, and the adhesive tape test (Mahé 2005, Heukelbach 2005, Walter 2011, Dupuy 2007). Topical permethrin 5% cream and oral ivermectin are the first-line therapies (Chosidow 2006, Heukelbach 2006, Ly 2009).

In rare instances there are unusual complications of scabies such as cutaneous vasculitis and glomerulonephritis, which can sometimes overshadow the primary disease (Mazzatenta 1996). Vascular purpura has rarely been reported (Valks 1996, Estève 2001).

### CASE REPORT

A 6-year old male patient was admitted to University Department of Pediatrics with a 10-day history of rash resembling bruises. The dermatosis started with ecchymotic and a few petechial skin changes on the back of the lower legs and progressed proximally to thighs, buttocks, trunk, upper extremities and face. He was referred to our Department for evaluation of skin changes resembling child abuse-like bruises (Figure 1

and 2). Parents have denied any kind of child abuse. At the follow up we noticed the progression of skin changes with generalization of nonblanching ecchymotic and petechial lesions, accompanied with intensive pruritic sensation and mild edema and arthralgia of talocrural joints, without any gastrointestinal involvement (Figure 3 and 4). According to the worsening of clinical picture during the hospitalization, any possibility of child abuse was excluded.

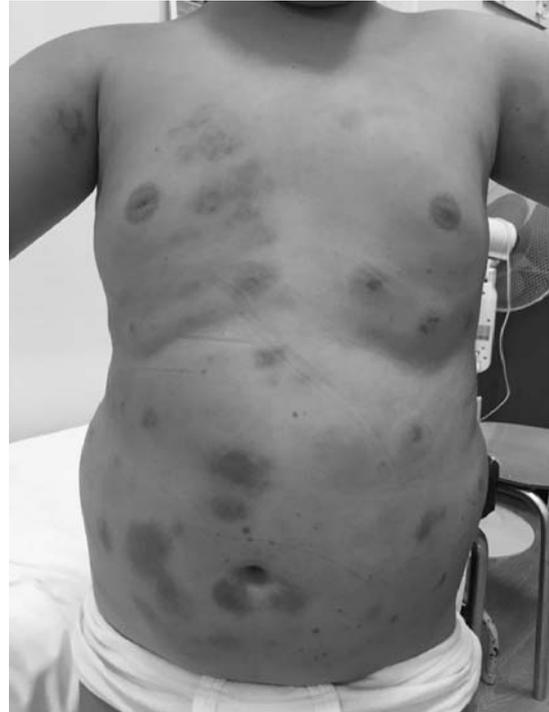
Laboratory tests showed slightly increased levels of CRP: 6.8 mg/dL; tIgE: 80.8 kIU/L and LDH: 329 U/L. Antistreptolysin O titer was 600 IU/L. The full blood count, serum urea, creatinine, electrolytes, protein electrophoresis, immunoelectrophoresis, coagulogram, C3, C4, ANA, ENA profil, c-ANCA, p-ANCA, EBV-VCA IgM, Anti-HAV IgM, HbsAg, Anti-HBc IgG were within the reference range. Urinalysis showed no hematuria or proteinuria. Coproculture, stool ova and parasites tests were negative, as well as the nasal and throat swabs. Microscopic examination of material scraped from few purpuric skin changes demonstrated numerous living mites and eggs leading to the diagnosis of scabies. Histological examination revealed hyperkeratosis, focal parakeratosis, acantosis, spongiosis and a dense infiltrate of lymphocytes, histiocytes and eosinophils through the epidermis and dermis. Infiltrating cells were arranged around small dermal vessels that showed signs of a lymphocytic vasculitis. Scabies-associated leucocytoclastic vasculitis was diagnosed. Treatment consisted of two applications of topical 5% permethrin cream followed by a systemic steroid therapy which resulted in a complete recovery.

### DISCUSSION

Generalized cutaneous vasculitis is a rare complication of scabies, and only few cases have been reported (Menné 1984). The exact mechanism by which infestation of the skin with *Sarcoptes* mite causes vasculitis is unknown. The possible immunological reaction to scabies probably occurs through a variety of mechanisms including immediate, cell-mediated and possibly immune complex pathways (Jarret 1998). Scabetic leucocytoclastic vasculitis with focal glomerulonephritis has been reported in two patients (Menné 1984, Jarret 1998).



**Figure 1.** Skin changes resembling child abuse-like bruises on the patient's face



**Figure 2.** Skin changes resembling child abuse-like bruises on the patient's trunk

Vasculitis has also been reported in a patient with Norwegian scabies and an human immunodeficiency virus positive man (Skinner 1992).

Physical abuse of children is a common occurrence, and it carries a significant morbidity and mortality rate (Mikulic 2013). The presence of various age bruising is

suspicious (Ricci 1991). Bruises on relatively protected places such as the upper arms, medial and rear thighs, arms, torso, cheeks, ears, neck, genitals and buttocks, should raise suspicion of abuse, especially if they are extensive and if bruises of different ages coexist (Kos 2006). According to the presence of various age bruises-like skin



**Figure 3.** Progression of skin changes with generalization of nonblanching ecchymotic and petechial lesions on buttocks and lower extremities



**Figure 4.** Progression of skin changes with generalization of nonblanching ecchymotic and petechial lesions on lower extremities

lesions in presented case, it was reasonable to suspect child abuse. Due to the worsening of clinical picture during the hospitalization, the possibility of child abuse in our case was excluded.

It can be presumed that the persistence of mites and their products caused by a delay in the diagnosis, inducing sensitization, could have resulted in the development of the leucocytoclastic vasculitis (Stinco 2008).

## CONCLUSION

Regarding to the increased number of atypical clinical manifestations of scabies, it would be wise to exclude scabies in any pruritic skin lesion, regardless of its clinical manifestation.

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### Contribution of individual authors:

Anita Gunarić: Design of the study, literature searches, literature and patient data analyses;  
Kristina Jurišić: Design of the study, literature searches, patient's data analyses;  
Dubravka Šimić: Design of the study, literature searches, patient's data analyses;  
Jasna Zeljko-Penavić: Design of the study, literature searches, patient's data analyses;  
Sandra Jozić: Patient's data analyses;  
Ivana Goluža: Patient's data analyses.

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Correspondence:

Anita Gunarić, MD

Department of Dermatology and Venereology, University Clinical Hospital Mostar

Kralja Tvrtka bb, 88000 Mostar, Bosnia and Herzegovina

E-mail: anita.gunaric@gmail.com