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Lambliasis-associated Schönlein-Henoch purpura in an Italian traveller: first case report in Italy

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ABSTRACT

A unique report of Schönlein-Henoch purpura (SHP) associated with a recent Giardia lamblia enteric infection is described and discussed on the ground of the available literature. Tinidazole plus an appropriate probiotic therapy, including Lactobacillus reuteri and vitamin D, proved to be effective in the condition. SHP is an immunocomplex-mediated disorder characterised by a number of differently associated signs and symptoms, leading to the possible involvement of the skin, joints, abdomen and kidneys. Recent bacterial, viral, or protozoan infections may trigger the disease onset in patients of all ages. The paper describes the first case of SHP triggered by a giardiasis. Tinidazole plus an appropriate probiotic therapy, i.e. L. reuteri and vitamin D proved to be effective in this condition. To our knowledge, this is the first reported case of lambliasis-associated SHP described in an international traveller.

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Key words: Giardia lamblia, giardiasis, Schönlein-Henoch purpura, travel medicine

A 34-year-old otherwise healthy immunocompetent woman, was seen 2 weeks after coming back from a 3-month stay in a small village located in Tanzania, where she participated in a volunteer humanitarian programme. The patient presented with watery, foul-smelling diarrhoea, associated with asthenia, dyspepsia, abdominal cramps/pain, mild arthralgia predominantly involving the upper and lower limbs, and a diffuse symmetric pompho-erythemato-petechial cutaneous vasculitis-like rash initially localized on the buttocks and trunk, and later spreading to the upper and lower limbs, characterised by small non-itching but palpable papules (Fig. 1). After skin biopsy, histopathologic studies confirmed IgA vasculitis. The patient denied contact with water from uncontrolled sources; however, during her stay in Africa, the patient worked as a health care professional and had contact with paediatric patients. Also, the patient reported having unprotected sex while in Africa. Before leaving Italy for Africa, the patient had been immunised against hepatitis A, typhoid fever and yellow fever, and received antimalarial prophylaxis as well.

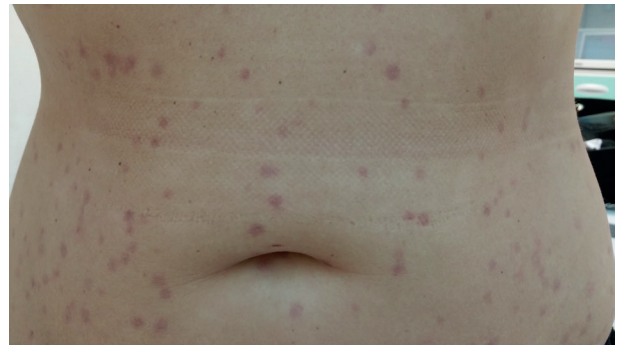

Figure 1. Lambliasis-associated Schönlein-Henoch purpura

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Table 1. Reported cases of Henoch-Schönlein purpura and parasitic infections

References, year, country	Patient, age/ /sex	Parasitic infection	Kidney disease	Treatment	Clinical course
Janković et al., 2016, Serbia	A 14-year-old girl	*Strongyloides stercoralis* infection	HSP nephritis	Mebendazole; prednisone + azathioprine + enalapril	Recovery
Tutanç et al., 2013, Turkey	A 30-month-boy	*Blastocystis hominis*	Renal function tests remained normal	Systemic steroid + co-trimoxazole	Recovery
Thapa et al., 2010, India	A 9-year-old otherwise healthy boy	*Plasmodium falciparum*, cerebral malaria	Renal function tests remained normal	Parenteral artesunate. He was discharged with primaquine	Recovery
Hamidou et al., 1999, France	A 17-year-old boy	*Toxocara canis* infection	Renal function tests remained normal	No anthelmintic treatment	Recovery
Bellanger et al., 2011, Canada	A 28-year-old woman	*Toxocara canis* infection	HSP nephritis	An anthelmintic treatment with diethylcarbamazine together with the corticosteroid treatment	Recovery
Ergür et al., 1999, Turkey	35 cases of HSP (25 males, 10 females), aged between 2 and 15 years	*Giardia intestinalis* 14 cases, *Trichomonas hominis* 6 cases, *Entamoeba histolytica* 3 cases, *Ascaris lumbricoides* 2 cases	Renal involvement 8 cases	NR	NR
Kim et al., 2010, Korea	An 8-year-old girl	*Entamoeba histolytica*	Renal function tests remained normal	Empirical antibiotic (metronidazole), methylprednisolone /oral prednisolone	Recovery
Demiricin et al., 1998, Turkey	An 11-year-old boy	*Entamoeba histolytica*	HSP nephritis	Metronidazole, prednisolone	Recovery
Reitano, Fondacaro, 1950, Italy	Data not available	Ascarids	Data not available	Data not available	Data not available

HSP — Henoch-Schönlein purpura; NR — not reported

Laboratory examinations showed that a platelet count and coagulation tests results were within normal limits. The tests demonstrated mild leukocytosis and eosinophilia (12.000 and 900 cells/μL, respectively). Microhaematuria and mild albuminuria, together with mild serum aspartate aminotransferase (AST/GOT, 110 U/L, normal value: 5–50) and alanine aminotransferase (ALT/GPT, 160 U/L, normal value: 5–50) indicated limited but present kidney and liver involvement, respectively. Serum C2-C3 complement fraction consumption and moderately reduced serum IgA levels were fully consistent with the diagnosis of Schönlein-Henoch purpura (SHP). As for the microbiological tests results, all cultures for bacteria, mycobacteria and fungi tested negative, as well as all serological examinations for bacterial or viral diseases, malaria tests, and all parasite tests performed on blood/urine/stool specimens, when trying to detect *Giardia lamblia* by both direct methods and DNA immunoenzymatic assay on multiple consecutive stool specimens. The typical clinical and laboratory picture associated with parasitological findings confirmed the diagnosis. The administration of a full dose of oral tinidazole, and of an oral probiotic including *Lactobacillus reuteri* and vitamin D, plus supportive rehydration therapy led to a complete resolution of signs and symptoms, with negative stool test results within 3 weeks of treatment. Follow-up tests performed 3 months and again 6 months post treatment revealed no abnormalities.

Schönlein-Henoch purpura is a form of vasculitis which is common in children, but is rare among adults. Typical manifestations include palpable purpura, abdominal pain, arthritis, and haematuria. It frequently occurs following an infectious trigger and involves IgA and C3 deposition in the walls of the small vessels. Many infectious agents were proposed as a potential trigger for SHP, particularly B-haemolytic *Streptococci.* Other bacterial agents that have been suggested as possible triggers of SHP include *Salmonella*, *Mycoplasma pneumonia*, *Staphylococcus aureus*, *Helicobacter pylori* and *Bartonella henselae* [1–11]. Many reports suggest that several viruses and vaccine inoculations should be included in the list of differentials responsible for triggering SHP. SHP, however, is rarely reported in association with parasitic infections [1–11]. Only 43 cases of SHP in association with parasites have been found in a MEDLINE search; they are summarised in Table 1 [1–11]. The analysis of the data retrieved suggests that, although it is an infrequent combination, clini-

cians should not underestimate this possibility. Parasitic diseases less frequently reported as triggers of SHP include intestinal giardiasis, amoebiasis, and toxocariasis. It was frequently responsible for the development of SHP nephritis in the cases described. Although representing an extremely rare condition, which was proved by our literature search [1–11], clinicians should be aware of the infrequent, but possible role of giardiasis in prompting SHP at any age and in the absence of underlying comorbidities.

Conflict of interest: None declared

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