

## Membranous glomerulonephritis overlapping with scabies

Sir,

Today, scabies affects to 300 million people worldwide. The disease is strongly associated with wars, migration, poverty and overcrowding.<sup>[1]</sup> This mites' infestation can predispose affected subjects to kidney disease.<sup>[2]</sup> In the survey of Hoy and McDonald, in children of 5-17 years the albumin/creatinine ratio correlated significantly with scabies.<sup>[3]</sup> Occurrence of poststreptococcal glomerulonephritis (PSGN), acute rheumatic fever and systemic sepsis are wellknown complications of scabies infestation.<sup>[4]</sup> PSGN is the most documented complication of scabies.<sup>[5]</sup> It has been postulated that antibodies to mite antigens cross-react with basement membrane antigens. There are few histological reports on renal involvement in scabies. A 20-year-old male, born in Somalia, with a previously good health, landed in Italy and was admitted to hospital because of dyspnea, malnutrition (height: 175 cm, weight 47 Kg; BMI: 15.34 Kg/m<sup>2</sup>) and generalized pruritus. The physical examination revealed diffuse linear excoriations disseminated all over his body and severe edema in the lower extremities. The laboratory examinations showed: proteinuria 7.4 g/day; albumin: 1.18 g/dl; creatinine: 4.02 mg/dl; reactive C-Protein 26.83 mg/dl (n.v. 0-0.3); total leucocyte 21,260/ $\mu$ L; hemoglobin: 6,8 gr/dl; coagulation and liver function tests were unremarkable and other immunological (ASLO, immunoglobulin, extractable nuclear antigens, C3 and C4) and microbiological (hepatitis B virus, hepatitis C virus, HIV, Filaria and Leptospira) investigations were negative. The microscopic investigation of a stool

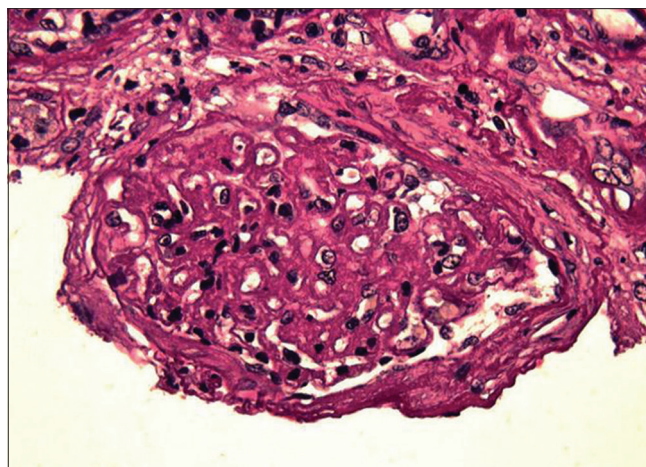
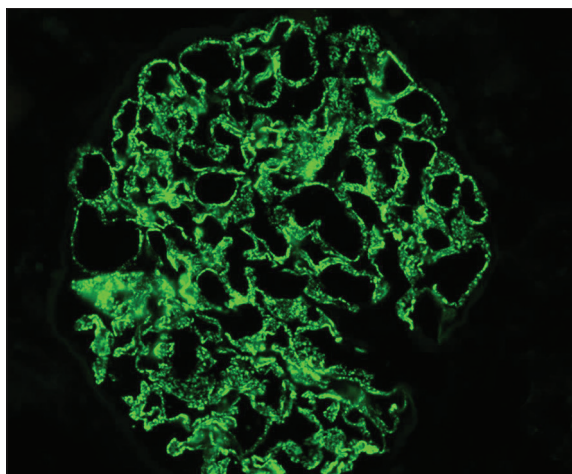


Figure 1: Renal biopsy. Light microscopy: Global and prominent thickening of the glomerular basement membranes. (PAS,  $\times$ 400)



**Figure 2: Renal biopsy. Immunofluorescence: Diffuse deposition of IgG along the glomerular capillary walls**

sample showed no abnormal findings. The instrumental examinations showed pleural and pericardial effusion. The dermoscopy demonstrated the mites' infestation. On biopsy, 6 out of 20 glomeruli were globally sclerotic; the remaining glomeruli showed diffuse and global thickening of the capillary wall [Figure 1]; the Jones stain demonstrated the spikes in capillary walls; no vascular or tubulointerstitial lesions were seen. The immunofluorescence examination displayed granular deposition of IgG, IgM and fibrinogen along the glomerular capillary (subepithelial) walls [Figure 2]. These findings supported the diagnosis of a stage III Membranous Glomerulonephritis. The patient was treated with topical treatment of 25% benzyl benzoate, albumin I.V. and furosemide. The Patient improved gradually. After two cycles of topical therapy, we observed the disappearance of itching, creatinine 0.80 mg/dl and proteinuria 2 gr/day. The patient was lost to follow-up because he continued his journey. This neglected parasitic disease is a major public health problem in resource-poor regions. Dysregulation of the immune system can produce the deposition of immunoimmunoglobulins along the capillary walls. To our knowledge, there are not reports on scabies combined with membranous nephropathy.

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### Conflicts of interest

There are no conflicts of interest.

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