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Schistosomiasis Screening of Travelers to Corsica, France

Philippe Gautret, Frank P. Mockenhaupt, Frank Von Sonnenburg, Camilla Rothe, Michael Libman, Kristina van de Winkel, Emmanuel Bottieau, Martin P. Grobusch, Davidson H. Hamer, Douglas H. Esposito, et al.

► **To cite this version:**

Philippe Gautret, Frank P. Mockenhaupt, Frank Von Sonnenburg, Camilla Rothe, Michael Libman, et al.. Schistosomiasis Screening of Travelers to Corsica, France: In response. *Emerging Infectious Diseases*, 2016, 22 (1), pp.160-161. 10.3201/eid2201.151606 . hal-01459929

HAL Id: hal-01459929

<https://hal.science/hal-01459929>

Submitted on 12 Oct 2023

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In Response: Regarding the comments by Berry et al. (1) on our previously published letter, we acknowledge that, in strict parasitological terms, confirmation of the diagnosis of urogenital schistosomiasis requires the identification of eggs by microscopic examination of urine. Nevertheless, we aimed at an operational case definition, providing criteria for identifying cases most likely to be true infections. We should not forget that microscopy has an unacceptably low sensitivity (2). We should also consider that currently available serologic tools are hampered by both a poor sensitivity and a poor specificity for *Schistosoma haematobium* (3). Regarding immunoblot, Berry et al. are correct in saying that there is not yet any formally published evidence of its accuracy for *S. haematobium* and that the high specificity declared, close to 100%, is based on data provided by the manufacturer. A formal study on the accuracy of this test is underway at the Centre for Tropical Diseases of Sacro Cuore Hospital. This assay has been less extensively assessed than that in which purified *S. mansoni* antigen is used, as described previously, which has shown very high accuracy (4). However, Western blot is already accepted as a diagnostic standard for the identification of other infectious diseases, including parasitic infections such as cysticercosis (for which, indeed, the direct parasitological confirmation is often impossible), and has become the test of choice for the latter (5).

Moreover, the population in our study was composed of persons not exposed to other parasites. Therefore, cross-reactions with other helminths would be extremely unlikely.

In conclusion, although we recognize that, by a strictly semantic definition, the term “confirmed” should be reserved for cases for which there is a parasitological proof, in operational terms, we could not rely on a direct test that has such a poor sensitivity in this particular patient population. Had we done so, we would have found a subestimated, and therefore totally incorrect, picture of the true prevalence, leading to inappropriate conclusions and actions (or lack thereof).

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In Response:

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DOI: <http://dx.doi.org/10.3201/eid2201.151606>

In Response: We agree with Berry et al. (1) that the diagnostic standard for confirmation of urinary schistosomiasis is the identification of eggs by microscopic examination of urine, especially in patients living in endemic areas with high schistosome loads. However, this approach may not apply to travelers who have low parasite loads and in whom the diagnosis relies mainly on serologic testing (2,3). Given the very poor sensitivity of egg detection in non-schistosomiasis-endemic settings, most tropical and travel medicine clinics in Europe use conventional microscopy systematically combined with 2 different (commercial or in-house) serologic tests (2). The sensitivity of this approach (i.e., diagnosis of infection if combined ELISA and hemagglutination inhibition assay or an indirect fluorescent antibody test are positive) is >78% for chronic urinary schistosomiasis; specificity is 75%–98% when using various in-house

and commercial kits (3). Future availability of promising ultra-sensitive tests (e.g., PCR and antigenic tests) may overcome the limitations associated with conventional microscopy and serologic testing for low-parasite load schistosomiasis.

As stated in our manuscript, we cannot exclude the possibility that our case definition generated false-positives; the potential limitations of our findings have already been discussed (4). Furthermore, we were cautious with our interpretation of the serologic test results and, therefore, claimed only 2 confirmed cases (4), 1 on the basis of egg detection and the other on positive serologic test results by using 2 different methods. We believe, on the basis of our findings (4) and in accordance with the European Centre for Disease Control experts (5), that the possibility of transmission in the Cavu River during the summer of 2014 cannot be excluded. We also want to reiterate the possibility of transmission in other rivers in Corsica, including the Solenzara, Osu, and Tarcu rivers, where *Bulinus* snails, which can serve as intermediate hosts for *Schistosoma haematobium*, were found during a malacological survey in 2014 (5).

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Correction: Vol. 21, No. 11

Details regarding vaccine serotypes and surveillance programs were described incorrectly in *Invasive Pneumococcal Disease 3 Years after Introduction of 10-Valent*

Pneumococcal Conjugate Vaccine, the Netherlands (M.J. Knol et al.). The article has been corrected online (http://wwwnc.cdc.gov/eid/article/21/11/14-0780_article).

Correction: Vol. 21, No. 11

The affiliation for Laura Nic Lochlainn was listed incorrectly in *Economic Costs of Measles Outbreak in the Netherlands, 2013–2014* (A.W.M. Suijkerbuijk et al.). She is with the European Programme for Intervention

Epidemiology Training (EPIET) at the European Centre for Disease Prevention and Control, Stockholm, Sweden. The article has been corrected online (http://wwwnc.cdc.gov/eid/article/21/11/15-0410_article).

Correction: Vol. 21, No. 12

Several author names were listed incorrectly in *Spillover of Peste des Petits Ruminants Virus from Domestic to Wild Ruminants in the Serengeti Ecosystem,*

Tanzania (M. Mahapatra et al.). The article has been corrected online (http://wwwnc.cdc.gov/eid/article/21/12/15-0223_article).

