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SPECIAL COMMUNICATION

Classification of the lesions observed in female genital schistosomiasis

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Schistosomiasis is a waterborne parasitic disease. In 2012, at least 249 million people required treatment to prevent morbidity, while 42 million were reported to have received treatment [1]. Studies have demonstrated that urogenital schistosomiasis is a common manifestation in areas where the species Schistosoma haematobium is endemic [2,3]. In these areas, infection in humans is caused by contact with infested water. Once inside the body, the parasites continue to lay eggs over their life-span, potentially for decades after exposure. These eggs may be deposited in the urogenital organs or may be excreted in urine.

The symptoms of female genital schistosomiasis can mimic sexually transmitted infections, with contact bleeding, and discharge [3]. Lesions caused by the disease may be similar in genital mucosa and the urinary bladder. Viable and non-viable schistosome eggs can cause an immune response in tissue, interrupted epithelium, and friable, abnormal blood vessels [1]. As a consequence of the broken mucosal barrier and the vas- cular and immunological changes, genital S. haematobium infection may be a risk factor for HIV transmission [3,4]. Cross-sectional studies have found a significantly higher prevalence of HIV in women with female genital schistosomiasis compared to those without the disease [4,5]. Furthermore, female genital schistosomiasis may increase the risk of HPV infection and persistence, infertility, and dyspareunia [3]. Regard- ing diagnosis, biopsies may pose an iatrogenic risk of HIV transmission in HIV-endemic areas and should be avoided if possible [3]. Urine sample diagnostics are not sensitive for female genital schistosomiasis and those infected do not necessarily excrete the eggs of S. haematobium in their urine.

Consensus meetings held in Copenhagen, Denmark on October 30, 2010 (60 participants) and in Durban, South Africa on January 18, 2013 (13 participants) considered clinical (intravaginal) and laboratory results from all of the African studies reporting on female genital schistosomiasis. Vulval findings were not discussed owing to lack of cases or insufficient data from the community-based studies [3].

The experts agreed that, in patients from S. haematobium endemic areas, one of three mucosal colposcopic findings, together or separately, may serve as adequate diagnosis for female genital schistosomiasis (Fig. 1): sandy patches appearing as single or clustered grains (A); homogenous, yellow areas (B); or rubbery papules (C). Abnormal blood vessels (D) are often seen concurrently. All findings may be present in the same patient. The findings are neither restricted to the transformation zone nor enhanced by acetic acid application. In research the clinical finding should be supported by one positive laboratory analysis for schistosomiasis. The consensus meetings concluded that the diagnosis of female genital schistosomiasis should be based on visual or

colposcopic inspection for the presence of lesions.

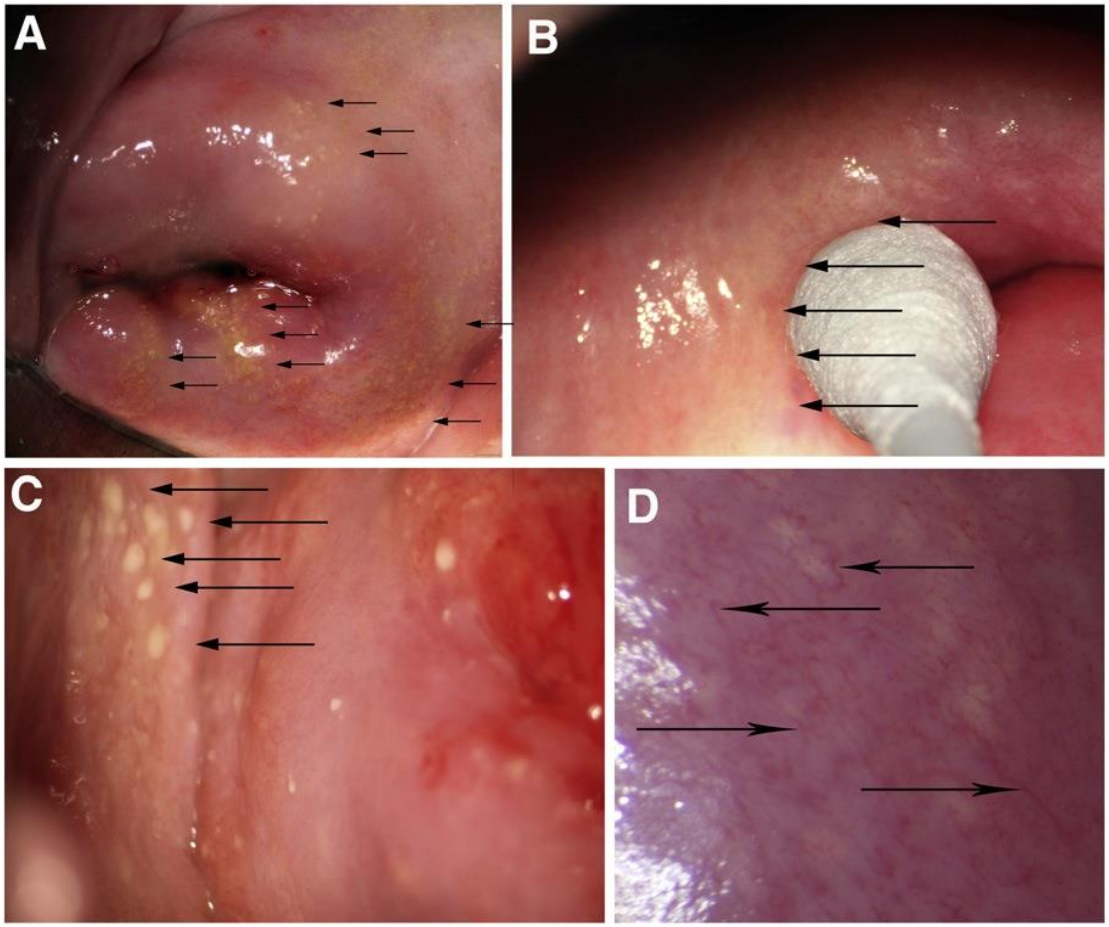

Fig. 1. Mucosal colposcopic findings to diagnose female genital schistosomiasis. (A) Grainy sandy patches appearing as single grains and clusters of grains extensively distributed. Arrows point to examples of the yellow grains portrayed on the cervix and the anterior and left fornices. (B) Homogenous sandy patch on the cervix. (C) Rubbery papules on the cervix and the right fornix (arrows). (D) Abnormal blood vessels, in this case extensive distribution outside the transformation zone; arrows point to examples. Mottled yellowish areas can be seen in the background. These are deep grains that would be visualized by micro-focusing, but are not in focus here.

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Conflict of interest

The authors have no conflicts of interest.

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