

Diagnosis of Female Genital Schistosomiasis by Colposcopy: Feasibility and Options under Conditions of Sub-Saharan Africa

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PROBLEM STATEMENT

In *Schistosoma haematobium*-endemic areas of SSA 33% - 75% of women present a female genital schistosomiasis (FGS) co-manifestation. Diagnosis of FGS in resource-poor settings is a remaining problem. Diagnostic tests based on biopsies are not feasible at the primary health care level, and other direct or indirect diagnostic tests are not valid or not applicable in low resource settings. Recently colposcopic findings [sandy patch (SP), grainy sandy patch (GSP)] were used as diagnostic test to gain prevalence data on FGS and to investigate possible associations between FGS and HIV. To date there is almost no data regarding the test quality of colposcopy to diagnose FGS.

Overall objective

To assess the diagnostic test quality of photo-colposcopic/colposcopic findings for FGS in SSA

Main objectives

To evaluate the results of photo-colposcopy findings and to assess the validity to diagnose FGS in a Tanzanian study group

To analyse the validity of the published pathognomonic colposcopic findings to diagnose FGS by a review of the available literature

METHODS

Twofold study approach

First: To analyse a photo-colposcopic data set obtained in a schistosomiasis endemic area in Tanzania, 1996. The reference test is biopsy-based: QCBT. The evaluation of the study group (N=115, aged 15-45 years) is based on three classification categories of colposcopic findings: normal, abnormal/suspect, and unsatisfactory. The study group is compared with a reference group (N=203, aged 15 and 45 years, pictures not relatable) by questionnaire data.

Second: To re-evaluate the researched data by sensitivity, specificity and predictive value analysis. The literature is identified by PubMed data base, MeSH terms and key word search.

RESULTS

Assessment photo-colposcopy: SP (any type): sensitivity: 23.4%, specificity: 94.4%. Pooled criteria (abnormal/suspect): sensitivity: 38.3%, specificity: 88.1%. The majority of FGS-positive cases 76.6% (36/47) do not present characteristic SP (any type) or abnormal/suspect findings 61.7% (29/47). Only the sandy patch (any type) showed significant association with FGS by the chi-squared test.

Study and referent group have an equal socio-demographic and reproductive health background. The higher FGS prevalence of the study group is explained by the optimised colposcopy/biopsy. SP (any type) does not have such a characteristic presentation.

Literature review: Three studies published primary data on colposcopy and FGS in SSA. SP and GSP are the stated pathognomonic findings. For GSP (reference ova in any genital specimen): sensitivity: 30.5%, specificity: 91.2%, positive predictive value: 60.5%, negative predictive value: 74.8%. For SP (reference biopsy): sensitivity: 27.3%, specificity and positive predictive value: 100%, negative predictive value: 46.7%. The majority of cases, 69.5% (105/151), are not diagnosed by GSP or SP, 72.7% (24/33). Consistent criteria and guidelines for colposcopy and FGS are non-existing.

DISCUSSION

FGS pathognomonic findings do not have such a characteristic presentation based on the specific milieu of the LRT. The typical conditions of the LRT are reducing the validity of colposcopic findings for FGS. A standardised process of colposcopy for FGS does not exist. The diagnostic of colposcopic findings is still based on biopsies to maximise the sensitivity. Due to the low sensitivity disease associations based on prevalence data gained by colposcopy should not be concluded.

CONCLUSION: The test validity of colposcopic findings is insufficient. A standardised process and observational studies to provide further evidence on colposcopy for FGS are necessary.

KEY WORDS: female genital schistosomiasis and colposcopy, sandy patch