Background: Male Genital Schistosomiasis (MGS) is a potentially severe consequence of chronic urogenital schistosomiasis, however very little original data exists regarding prevalence, recovery with adherence to treatment, and co-infective sexually transmitted infections (STIs) in Southern Africa. Hybridization in Urogenital Schistosomiasis (HUGS) is an ongoing longitudinal cohort study within Malawi, wherein a three-point sub-study on the clinical implications of MGS was performed.

Objectives: Determine the current prevalence of male genital schistosomiasis in Mangochi and Nsanje districts of Malawi. Evaluate changes in MGS symptoms across a year of Praziquantel therapy. Document the presence or absence of non-S. haematobium species within MGS cases with active schistosomiasis. Determine the prevalence of two common sexually transmitted diseases within MGS cases with active schistosomiasis.

Participants: All consenting males over the age of 18, positive for urogenital schistosomiasis at follow-up in June 2023. Total sample size: 23.

Methodology: Quantitative design with descriptive analysis. Participants were recruited from the HUGS survey cohort in Mthwira village, Nsanje, and Samama village, Mangochi. Symptomatology data was obtained through interviews with questionnaires. Urine samples were subject to filtration and microscopy. Semen samples were examined by microscopy in the collection bag, wet preparation and sediment slides. Egg counts were used to determine schistosomiasis intensity. Semen sediments and miracidia were also examined with real-time PCR for non-s. haematobium species, alongside a duplex high-resolution melt (HRM) assay to identify the presence or absence of three sexually transmitted infections: Trichomonas vaginalis, Human papillomavirus type 16 and Human papillomavirus type 18.

Outcome measures: Prevalence of male genital schistosomiasis in Nsanje and Mangochi districts. Prevalence of MGS symptoms. Prevalence and characteristics of hybrid schistosomes. Prevalence of HPV and T. vaginalis.

Results: The prevalence of MGS is 12.50% in Nsanje and 46.70% in Mangochi district, when using field microscopy. This rises to 25.00%% and 62.50% respectively when utilising molecular diagnostics. The modal symptom was genital pain. This shows minor improvement with biannual MDA, decreasing from 25.00% and 75.00% at baseline microscopy, 33.33% and 65.71% from qPCR. There was evidence of potential hybridisation within one MGS case and markers of zoonotic infection with Schistosoma mattheei in 16.7% of the cohort, all cases were from Mangochi district. T. vaginalis was more common than hrHPV, at a prevalence of 16.7%. Due to sample size limitations, the MGS prevalence decrease cannot be confirmed as statistically significant.

Conclusions (and implications for policy and research): MGS continues to present an ongoing challenge even in the context of biannual MDA. Men report they continue to experience symptoms of both urogenital schistosomiasis and genital schistosomiasis to a similar extent throughout therapy. Zoonotic infections are present, as are high-risk sexually transmitted infections in this region. This highlights a need for improvement in diagnostics and a control strategy increasing disease awareness, with contextual risk factor management.