The epidemiology of schistosomiasis in Egypt: summary findings in nine governorates.


Abstract:

Health questionnaires and parasitologic examinations of urine and stool were evaluated from a stratified random sample of 89,180 individuals from 17,172 households in 251 rural communities in 9 governorates of Egypt to investigate the prevalence of, risk factors for, and changing pattern of infection with Schistosoma sp. in Egypt. A subset, every fifth household, or 18,600 subjects, had physical and ultrasound examinations to investigate the prevalence of and risk factors for morbidity. Prevalence of S. haematobium in 4 governorates in Upper Egypt in which it is endemic ranged from 4.8% to 13.7% and averaged 7.8%. The geometric mean egg count (GMEC) ranged from 7.0 to 10.0 ova/10 ml of urine and averaged 8.1. Age stratified prevalence of infection peaked at 15.7% in the 10-14-year-old age group and decreased to 3.5-5.5% in all groups more than 25 years of age. Age-stratified intensity of infection peaked at approximately 10.0 ova/10 ml of urine in the 5-14-year-old age groups and was about half that in all groups more than 25 years of age. Males had higher infection rates and ova counts than females in all age groups. Schistosoma mansoni was rare in Upper Egypt, being consequential in only Fayoum, which had a prevalence of 4.3% and an average intensity of infection of 44.0 ova/g of stool. Risk factors for S. haematobium infection were male gender, an age >5 years of age. Males had higher infection rates and ova counts than females in all age groups. Schistosoma haematobium was rare in these governorates; Ismailia (1.8%) had the highest infection rate. Risk factors for S. mansoni were male gender, an age >10 years old, living in smaller communities, exposures to canal water, a history of, or treatment for, schistosomiasis or blood in the stool, detection of splenomegaly by either physical examination or ultrasonography, and ultrasonography-detected PPF. The more severe grades (II and III) accounted for 463 (13.3%) of the 3,494 having ultrasonography-detected PPF. Risk factors for morbidity (ultrasonography-detected PPF) were similar to those for infection except that inhabitants of smaller communities were not at increased risk. Active S. mansoni infection increased the odds ratio (OR) of having PPF by 1.37. In comparison with others with normal-size livers, subjects having hepatic enlargement in either the midclavicular line or the midsternal line detected by physical examination or ultrasonography had a reduced risk (ORs = 0.64-0.72) of PPF. The prevalences of lesions detected by ultrasonography were 23.7% for enlargement of right lobe of the liver, 11.3% for enlargement of left hepatic lobe, 20.6% for splenomegaly, and 50.3% for PPF. Schistosoma mansoni has almost totally replaced S. haematobium in Lower Egypt.

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