

Abstract

The reliability of using urinalysis reagent strips, which semi-quantitatively measure hematuria and proteinuria, to correctly select urine specimens found by microscopy to have *Schistosoma haematobium* eggs was studied in 359 previously unscreened Kenyan primary school children. The presence of and degree of hematuria and proteinuria were highly correlated with the presence of *S. haematobium* eggs and with egg counts in urine specimens. Hematuria was more strongly correlated with *S. haematobium* egg counts than was proteinuria. The ability of presence of hematuria or proteinuria, or both, to select all microscopically positive cases of urinary schistosomiasis for treatment was tested using sensitivity (ST) and specificity (SP) analysis. Selection of cases using 1) presence of hematuria alone, and 2) presence of either hematuria or proteinuria had the highest combined ST and SP (88% ST, 97% SP; 91% ST, 92% SP, respectively). Most of the few cases detected by microscopy but not by reagent strips had low egg counts. The presence of hematuria alone failed to detect only 12% of *S. haematobium*-positive cases (mostly low egg counts), and only 3% of *S. haematobium*-negative persons had urinary blood and would have received unnecessary treatment. Preliminary studies on the use of reagent strips to screen previously infected children 6 months after treatment, and the effects of seasonal variations in temperature and humidity on urine specimen volume, egg counts, and reagent strip results are also presented. The practical field use and cost of reagent strips in *S. haematobium* control programs are discussed.