

Impact of Health Education and Treatment Interventions on Urinary Schistosomiasis in School Children

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OBJECTIVE

The purpose of this study was to determine the impact of health education and treatment interventions on the prevalence, intensity and perception of urinary schistosomiasis among school children in three rural communities in Cameroon.

BACKGROUND

Schistosomiasis is a chronic infection caused by flukes belonging to the genus *Schistosoma*. At least 200 million people, in 74 countries, are infected with the disease and at least 600 million are at risk of infection [1]. Like the majority of the parasitic diseases, schistosomiasis is influenced by human behavior, mainly water use practices and indiscriminate urination and defecation, but also, failure to take advantage of available screening services.

METHODS

The study was conducted from September 2001 to April 2008. In the first phase, urine specimens were collected from school children in Gounougou, Ouro-Doukoudje, and Lagdo, and examined for the presence of ova. Pupils were administered questionnaires through their school teachers. Students in Gounougou received health education while those in Ouro-Doukoudje received a mass treatment of Praziquantel. Phases 2, 3 and 4 were conducted in June 2003, May 2005 and June 2007 respectively and consisted of health education intervention in Gounougou and Praziquantel distribution in Ouro-Doukoudje. Phase 5 (April 2008) consisted of specimen collection and administration of questionnaires in the three villages.

RESULTS

There was a significant drop in the prevalence in Gounougou (53.2% vs 3.5%, $p=0.001$) and Ouro-Doukoudje (39.4% vs 3.9%, $p=0.001$) but not in Lagdo (31.4% vs 33.7%, $p=0.404$). The drop of prevalence in Gounougou was significantly greater than that in Ouro-Dokoudje (49.7% vs 35.5% $p=0.001$). There was a drop in the intensity of infection (percentage of children with more than 100 ova/ml of urine) in Gounougou (54.7% vs 16.6% , $p=0.001$) and Ouro-Doukoudje (28.8 vs 5.2, $p=0.001$), but not in Lagdo (29.5% vs 34.2%, $p=0.413$). The percentage of children seeking treatment in health centers in Gounougou increased (29.9 % vs 93.5%, $p=0.001$), but decreased in Ouro-dokoudje (32.4% vs 28.9%, but $p=0.825$) and Lagdo

(37.6% vs 29.8%, $p=0.236$).

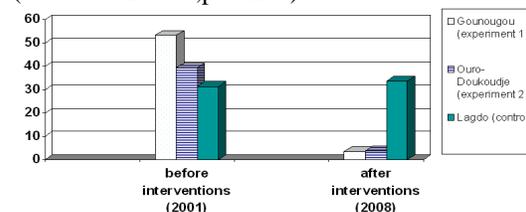


Figure 1 – Comparison of the prevalence of of urinary schistosomiasis among school children before and after health education and treatment interventions

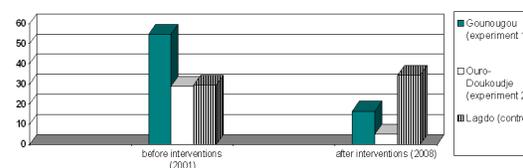


Figure 2 – Comparison of the intensity of infection among school children before and after health education and treatment intervention

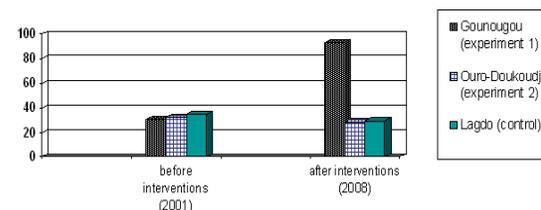


Figure 3 - Comparison of the health centers attendance by school children before and after health education and treatment interventions

CONCLUSIONS

We concluded that health education through the framework of school, as a control method for urinary schistosomiasis was more efficient as mass treatment in reducing the disease prevalence. We recommended this inexpensive method to be adopted as a national policy in developing countries, provided the drugs remain available in the list of essential drugs in rural health centers.

REFERENCES

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