



WHODOC 3/1

THE PREVENTION OF BLADDER CANCER:
AN INTEGRATED APPROACH THROUGH THE CONTROL OF SCHISTOSOMIASIS¹

Identification of specific causes of cancer and their prevention is of global concern for cancer control efforts. The geographical distribution of urinary schistosomiasis and cancer of the bladder supports an aetiological relationship between these two diseases. The association of bladder cancer and schistosomiasis is a unique combination of a cancer which can be identified at an early stage at the community level and an aetiological agent which is susceptible to specific treatment. Now more than ever before the feasibility of the control of bladder cancer through control of urinary schistosomiasis in endemic countries should be carefully examined.

1. SCHISTOSOMIASIS

Schistosoma haematobium infection or urinary schistosomiasis is endemic in 52 African and Eastern Mediterranean countries. This disease is an occupational hazard affecting the poor agricultural rural populations of these countries. It is estimated that at least 180 million persons are at risk of infection and about 90 million persons are infected (WHO, 1980; Jarotski & Davis, 1981).

The highest prevalence and the major proportion of heavy infections are observed in school-age children. In most rural endemic areas, extensive and frequent water contact of this age-group is associated with heavy infections. The excretion of blood and protein in the urine of infected children, as well as adults, is directly correlated with the number of S. haematobium eggs in the urine (Mott et al., 1983). These clinical manifestations are related to severe focal lesions of the bladder which may develop into chronic disease including carcinoma of the bladder 20-30 years after infection begins.

For many years it has been known that the bladder lesions due to S. haematobium infection in children may be reversible with antischistosomal treatment. The older antischistosomal drugs were highly toxic and their large-scale use was limited, particularly in children. A turning point has been reached now that safe oral antischistosomal drugs, praziquantel and metrifonate, can effectively stop the progress of and reverse the morbidity due to S. haematobium infection (WHO, 1980; Jarotski & Davis, 1981; Mott et al., 1983).

2. BLADDER CANCER

Bladder cancer, one of the 12 most common cancers, is estimated to occur in over 173 000 persons per year (Parkin et al., in press). Among males, bladder cancer is ranked as the eighth most common cancer and is the twelfth most common cancer in females. Two types of bladder cancer may be distinguished clinically, pathologically and epidemiologically.

Transitional cell bladder cancer is frequently observed in the western developed countries and is related to industrial exposure to known carcinogens. Squamous cell bladder cancer occurs in African and Eastern Mediterranean countries, such as Kenya, Malawi and Egypt,

¹ This document was derived from a presentation to the twenty-fifth session of the WHO Global Advisory Committee on Medical Research which met in Geneva on 10-13 October 1983.