

# Bilharzial Uropathies and a Scheme for Primary Medical Care

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**Summary**—Fifty patients suffering from the late effects of urinary bilharziasis were studied. A preliminary idea about the incidence of bilharzial cancer in the endemic area of Jeezan is presented. The role of ileal loop ureteric replacement in extensive ureteropathy is emphasised.

A scheme is proposed for the categorisation of bilharzial patients on the basis of their symptoms in order to detect complicated cases at the primary medical care level.

Alio (1967) estimated that about one million people in Saudi Arabia have bilharziasis. Although Arfaa (1976) did not agree with that estimate, his survey confirmed that bilharziasis is an important public health problem with the prevalence of *Schistosoma haematobium* in the South-west region of Jeezan and the North-west region of Medina. Nevertheless, the magnitude of the bilharzial problem is not sufficiently investigated and apart from Wallace (1979), reports on urological aspects of the disease are scarce.

In this study we present our experience with bilharzial uropathy and suggest a scheme for categorising patients at the level of primary medical care to help in the detection of complications at an early stage.

## Patients

The series consisted of 50 patients seen in the urology clinic within 2 years. Bilharzial uropathies represent the second commonest urological problem after urinary stones. The patients presented and were dealt with as follows:

### 1. Bladder Cancer

Eight of the 50 patients had squamous cell carcinoma in addition to bilharziasis. Their ages ranged from 18 to 45 years. Six of the eight cases presented at a late stage (Fig. 1). This was due to

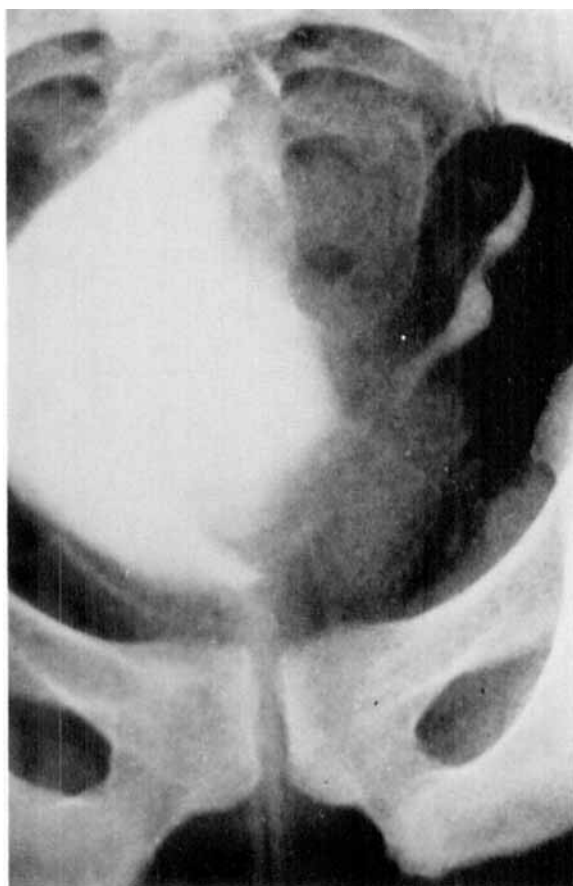


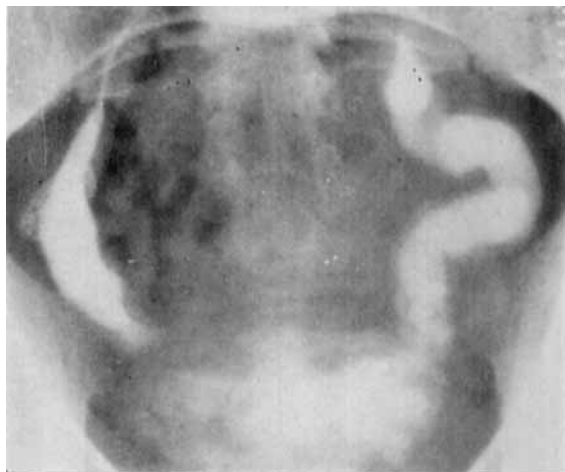
Fig. 1 IVU showing an extensive bilharzial bladder cancer.

misdiagnosis, either because living bilharzial ova were present in the urine or because the patient gave a history of passing a stone. These eight patients represented 60% of the total number of cases of cancer bladder seen within these 2 years. As hospital statistics alone may not represent the true incidence of bilharzial bladder cancer, a preliminary urine cytology survey of the bilharzial patients in the Jeezan region was made by Abdel-Halim and Bideewy (unpublished data). It showed a relatively high incidence of bladder cancer in association with bilharziasis, manifested by one positive and one with squamous metaplasia out of 94 specimens. Also, in the city of Abha, near the Jeezan region, Abdel-Kader (personal communication) saw 14 cases of bilharzial bladder cancer in one year. In contrast to Wallace (1979), these findings show that bladder cancer as a complication of bilharziasis is relatively frequent in Saudi Arabia.

In the two cases which presented to us at an early stage, transurethral resection of the tumour was done with satisfactory results (follow-up period 6-24 months).

### 2. Bilharzial Polyps

Bilharzial polyps (Figs 2 and 3) were cystoscopically confirmed in five patients. In two cases they simulated malignancy and therefore were completely removed by transurethral resection. In the other cases the polyps markedly regressed after a course of anti-bilharzial treatment.



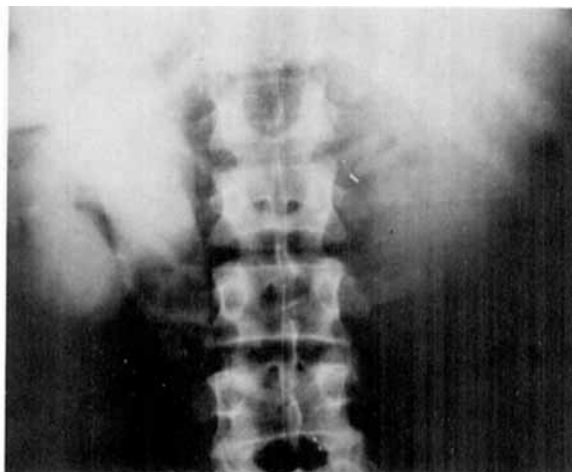
**Fig. 2** IVU showing multiple bilharzial polypi in the bladder with bilateral ureteropathy.



**Fig. 3** IVU showing multiple bilharzial polypi in the bladder and lower third of the left ureter.

### 3. Bilharzial Ureteropathy

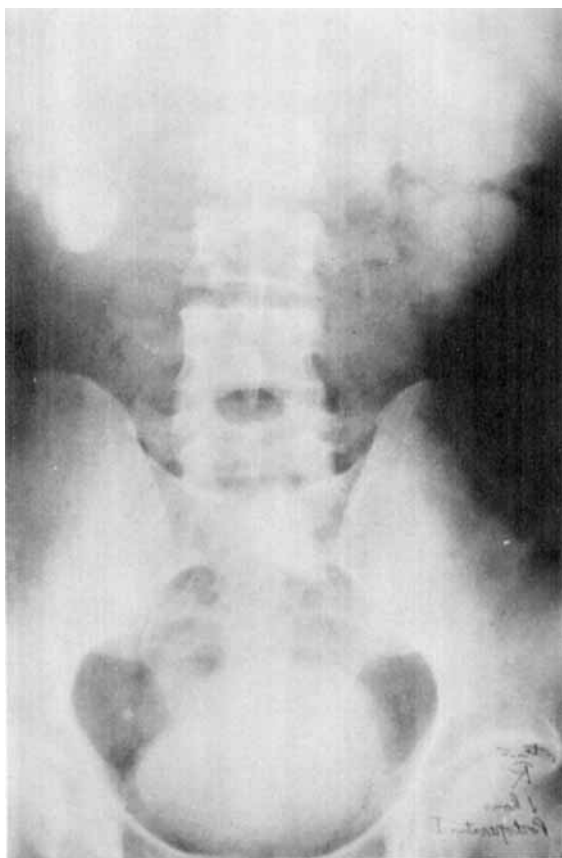
Bilharzial ureteropathy of various degrees (mostly bilateral) was seen in 20 cases. In five patients it involved the whole length of the ureters, which became markedly tortuous, dilated and atonic (Fig. 4), leading to back pressure on the kidneys with



**Fig. 4** IVU showing extensive bilharzial ureteropathy with unilateral loss of kidney function.

renal failure in one patient and unilateral radiological loss of kidney function in another two.

These five cases could be described as type C or D according to the classification of Husain *et al.* (1980) and they were classed as extensive and decompensated. We considered ileal loop ureteric replacement to be indicated (Abdel-Halim, 1980, 1981), and this procedure restored function to all of the radiologically non-functioning kidneys (Fig. 5).



**Fig. 5** IVU of patient in Fig. 4, 6 months after bilateral ileal loop ureteric replacement.

In the remaining 15 cases the ureteropathy involved only the lower third of the ureters and caused no back pressure effect on the kidneys. They were classed as mild compensated ureteropathy (type A or B according to Husain *et al.* (1980). They were treated either conservatively or with ureteric dilatation (open or endoscopic).

#### 4. Bladder Neck Obstruction

From our experience, ureteropathy is always associated with variable degrees of bladder neck

obstruction and this is severe in the extensive decompensated cases. Bladder neck resection was always done in these cases, therefore, in association with ileal loop ureteric replacement.

On the other hand, bilharzial bladder neck obstruction may be present without ureteropathy. In these cases and those associated with mild compensated ureteropathy, bladder neck resection is undesirable because of its side effects on fertility. Instead we resorted to repeated urethral dilatation unless there was associated severe vesicoureteric reflux.

#### 5. Bilharziasis and Stones

In this series 16 patients presented with urinary tract stones in addition to bilharziasis. The association of stones with bilharziasis could lead to serious diagnostic problems as a history of passing stones may obscure early bilharzial cancer. Also, removal of a stone considered to be the cause of a hydroureter will be complicated by a fistula if a distal bilharzial stricture is not detected and dealt with.

Some of the 50 patients, despite receiving anti-bilharzial treatment in the past, had fresh bilharzial reactions detected in their biopsies and specimens, indicating the presence of living worms which maintained ovideposition. Anti-bilharzial treatment was therefore given routinely before embarking upon special management.

#### Discussion

It was noticed that in many cases the bilharzial complications were confused with simple bilharzial cystitis at primary medical care level (El Said *et al.*, 1979; Ghonaim and Awaad, 1980). We suggest the following scheme for the categorisation of bilharzial patients on the basis of their symptomatic presentation in order to detect complicated cases at an early stage.

##### Category I

Patients with fresh infection who present with characteristic symptoms of the acute stage (terminal haematuria and burning). They almost always have bilharzial ova in their urine. For this group, anti-bilharzial treatment is enough, unless it is a case of repeated infection, when follow-up is indicated.

##### Category II

Patients with a past history of urinary bilharziasis who present with symptoms of obstruction (e.g.

loin pain and dysuria), malignancy (e.g. severe haematuria and necroturia) and/or renal failure. They may or may not have bilharzial ova in their urine. This group should have anti-bilharzial treatment and be referred to the urology clinic.

### Category III

Patients with a past history of repeated infection with urinary bilharziasis who present with non-urological symptoms. Usually, they do not have bilharzial ova in their urine. These patients should have regular cytological examination of the urine to detect early malignancy.

The problem of bilharzial uropathy will be solved only when epidemiologists and public health authorities succeed in eradicating bilharziasis. Until this happens, measures should be taken to detect complications at an early stage and this can be achieved only at the level of primary medical care.

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