

Table 5

Significance of reflux:
patients with recurrent urinary infection

	No. of patients with		
	Reflux	No reflux	No details
Deteriorating hypertension	9	3	1
Deteriorating pyelogram	10	4	3
Elevated creatinine	5	1	0

of death, 13 had recurrent urinary infections, 7 of them with radiological evidence of pyelonephritis; none had micturating cystograms, but it is interesting to speculate whether they died of pyelonephritis rather than carcinoma of the bladder.

Discussion

Vesico-ureteric reflux occurred in 35 out of 60 surviving patients (58%) who had undergone interstitial radioactive implants for carcinoma of the bladder. When an unselected group of patients with non-invasive tumours were also screened for vesico-ureteric reflux an even higher proportion (78%) refluxed than in those who were treated with interstitial irradiation.

Twenty-five out of the 35 who refluxed following irradiation had recurrent urinary infection (Table 2), while 13 out of the 25 non-refluxing had recurrent urinary infection (Table 2). However, 11 out of 18 patients who refluxed after tumour resection alone also had recurrent urinary infection. There is no statistical difference in the incidence of recurrent infection between irradiated and non-irradiated refluxing patients.

The association of vesico-ureteric reflux and chronic urinary infection can be lethal. The figures shown in Table 5 imply that some patients with carcinoma of the bladder may be dying of pyelonephritis and not tumour.

Conclusions

- (1) Vesico-ureteric reflux occurs in 58% of patients treated with interstitial radioactive implants for carcinoma of the bladder. In 78% of a small series of patients treated by open or transurethral removal of a bladder tumour without irradiation, reflux also occurred.
- (2) Recurrent urinary infection was found in 25 out of 35 irradiated refluxing patients and in 11 out of 18 non-irradiated refluxing patients.
- (3) This combination of vesico-ureteric reflux and recurrent urinary infection is potentially lethal.

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Calyceal Obstruction due to Parapelvic Cyst [Abridged]

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Parapelvic renal cysts are not uncommon and occasionally cause obstruction or deformity of the pyelocalyceal system, the whole of the drainage system being involved. It is very unusual, however, for such a cyst to produce marked obstruction of a part of the calyceal system without impeding drainage from the rest of the kidney. Two such cases have been seen and treated recently at the Institute of Urology.

One patient presented with symptoms referable to the affected kidney, having had intermittent aching pain in the left loin for several years. He was referred for investigation after an episode of painless total hæmaturia. An intravenous pyelogram showed obstruction to the upper calyces by a space-occupying lesion in the left kidney. Renal arteriography showed no tumour circulation in the centrally placed lesion and at exploration a tense parapelvic cyst was found. The neck of the upper group of calyces appeared to be nipped between the cyst and the renal artery. The cyst was uncapped and a subsequent intravenous pyelogram showed almost complete resolution of the dilatation previously affecting the upper calyces.

The second patient was found to have a renal cyst during routine investigation of symptoms due to bladder outlet obstruction. The intravenous pyelogram showed a filling defect in the centre of the left kidney with dilatation of the upper group of calyces. Left renal arteriography showed the vessels to the upper pole stretched around a large avascular mass. The cyst was punctured and 200 ml of clear, straw-coloured fluid aspirated. Subsequent intravenous pyelography showed that the dilated calyces had returned almost to normal size.

The techniques of nephrotomography and renal arteriography now enable the diagnosis of renal cyst to be made with a high degree of accuracy. In these two cases the diagnosis was made and the calyceal obstruction relieved with conservation of the whole kidney. Exploration of the kidney with its concomitant morbidity and mortality is unnecessary in the majority of cases although in the first case described here the leash of arteries around the cyst made aspiration hazardous and necessitated operation.

REFERENCE

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(Meeting to be continued)