

## Studies of Vesical Diverticula

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Diverticula of the bladder are usually considered to be secondary to urethral obstruction and many series (Miller 1958, Fox *et al.* 1962) contain no examples of primary diverticula. Diverticula have been thought to act as a 'safety valve' protecting the kidneys from the effect of urethral obstruction (Hamilton 1943) presumably by lowering the intravesical pressure (Miller 1958). A series of patients with bladder diverticula have been studied by pressure/flow methods described earlier (Smith *et al.* 1966). Three male patients with undoubted secondary diverticula all showed low urinary flow rates (3–5 ml/sec) and high intravesical pressures on voiding (156–250 cmH<sub>2</sub>O) compared with the normal upper limit of 100 cmH<sub>2</sub>O (Smith 1968). Following diverticulectomy and prostatectomy (in one case transurethral prostatectomy alone) the voiding pressures fell and the flow rates rose to within normal limits.

These studies indicate that secondary vesical diverticula are associated with high, sometimes very high intravesical voiding pressures and the concept that they act as a 'safety valve' by lowering pressure is invalid.

Four patients – 2 women and 2 men – were considered to have primary vesical diverticula not associated with urethral obstruction. In the 3 on whom pressure studies were performed intravesical pressures varied between 47 and 69 cmH<sub>2</sub>O with high flow rates. These patients presented with urinary infection rather than obstruction, although one patient was referred after two open operations on the lip of the diverticulum had failed to cure his retention. In this case a large midline posterior diverticulum filled the hollow of the sacrum on lateral cystography. In each case the bladder wall was not trabeculated and was of normal thickness at operation. Pressure/flow studies showed virtually identical values before and after simple diverticulectomy.

Primary diverticulum of the bladder is probably more common than is generally recognized and should be treated by diverticulectomy alone, leaving the bladder neck intact.

### REFERENCES

- Fox M, Power R F & Bruce A W  
(1962) *Brit. J. Urol.* 34, 286  
Hamilton A J C (1943) *Edinb. med. J.* 50, 513  
Miller A (1958) *Brit. J. Urol.* 30, 43  
Smith J C (1968) *Brit. J. Urol.* 40, 125  
Smith J C, Edwards D & Bryant G  
(1966) *Brit. J. Urol.* 38, 542

## Carcinoma of the Urachus [Summary]

by J L Grogono MB FRCS  
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Five cases were described. In each case the symptoms were those of a bladder tumour, and cystoscopy showed an isolated tumour at the bladder apex. All were mucus-secreting adenocarcinoma. The methods of treatment, and poor prognosis, were reviewed. It was suggested that for early cases the operation most appropriate was partial cystectomy with radical removal of pre-peritoneal structures above the bladder. Correct pre-operative diagnosis will greatly assist in the surgical management, and if an isolated tumour at the bladder apex is found on biopsy to be an adenocarcinoma, then the urachus is the most likely site of origin.

The following paper was also read:

### Technical Improvements in Renal Scanning

Dr H Byrom, Mr P M Dean,  
Mr R Sear and Dr A L Turnbull  
(for Mr G C Tresidder and Mr J P Blandy)  
(Departments of Physics and Urology,  
The London Hospital, London)

This paper will be published in a later issue.