

Thursday 26 June 10.00–11.45
Upper Tract Disorders
Chairmen: M. Resnick and D. Tolley

103

Long-term follow-up of renal scarring in spinal cord injured patients

I. EDHEM and S.C.W. HARRISON*

*The Calderdale Royal Hospital, Halifax, and *Pinderfields General Hospital, Wakefield, UK*

INTRODUCTION

The management of the bladder sequelae in patients with spinal cord injury (SCI) remains controversial. The main options consist

of clean intermittent catheterization, continuous bladder drainage with an indwelling catheter, sphincterotomy with a condom catheter, or urinary diversion. Chronic catheterization is associated with

a higher incidence of renal scarring. Furthermore, chronic catheterization does not necessarily ensure a constant reduction in intravesical pressure. In this study we investigated the long-term outcome of

scarring after the detection of a renal scar in the SCI population.

PATIENTS AND METHODS

Fifty-six renal units in 28 patients with SCI were examined; the mean follow-up was 19.1 years. The inclusion criterion was the development of persistent renal scarring after SCI, on upper urinary tract imaging. The effects of patient age, level of spinal injury,

method of bladder drainage, and interval between spinal injury and the detection of renal scarring on the occurrence and progression of scarring were assessed.

RESULTS

Renal scarring was detected in 59% of the renal units; most (84%) scars were static, with a few (16%) progressing. There was no correlation between age, level of SCI or time

to scar development and the occurrence of renal scarring. There were no deaths from renal causes. All the patients with progressive renal scars used indwelling catheterization.

CONCLUSIONS

This is the first study to our knowledge to show that renal scarring in the SCI population tends not to be progressive, and that it can occur at any time after SCI.

104

Monitoring ureteric peristalsis and its recovery after ureteroscopy

A.J. YOUNG, A. SOLER, P.L. ACHER, P.J. McCAHY and R.A. MILLER*

*Departments of Urology, William Harvey Hospital, Ashford, Kent, and *Whittington Hospital, London, UK*

INTRODUCTION

Ureteroscopy is a common procedure but knowledge of the ureteric response to instrumentation is limited. Ureterodynamic variables, e.g. intraureteric pressure, conduction velocity, direction of peristalsis and EMG, have been measured using various methods but they are impractical for routine clinical use. Thus the aim of this study was to evaluate a new commercially available 'ureteric pressure transducer catheter' which records peristaltic frequency, conduction velocity and intraureteric pressure. These were assessed in an animal model and in patients after ureteroscopy.

PATIENTS, MATERIALS AND METHODS

An ambulatory urodynamic monitoring system was adapted to record the output

from two pressure transducers mounted on a 4 F ureteric catheter. The catheter was inserted into the left ureter of six anaesthetized pigs and peristalsis recorded. In five patients who had undergone ureteroscopy with or without stone removal, the recording catheter was inserted at the end of the procedure and the recovery of peristalsis monitored for up to 24 h.

RESULTS

The un-instrumented pig ureter showed spontaneous peristalsis immediately on catheter insertion, whereas the instrumented human ureter had a variable response that appeared to be related to previous physical or pharmacological effects. However, peristalsis had mostly returned to normal within 24 h.

CONCLUSION

Peristaltic frequency, pressure and conduction velocity can be measured with the ureteric catheters described. To our knowledge this is the first commercially available system for recording ureteric peristalsis and provides a valuable method for detailed studies of ureteric function. Early results from human studies indicate that peristalsis generally recovers within 24 h of ureteroscopy.

Funding: DTI SMART Grant

105

A UK audit of laparoscopic nephrectomy

S.R. KEOGHANE on behalf of all members of the BAUS section of Endo-urology

BAUS Section of Endo-urology, London, UK

INTRODUCTION

Data are presented from the first UK audit of laparoscopic nephrectomy.

METHODS

The period covered by this audit was from 1 July 2001 to 30 June 2002. The indications for

surgery, and data obtained during and after surgery, with some demographic details, were collected .

RESULTS

Data were received from 24 centres; 13 performed five or fewer cases per year; 236 nephrectomies were performed and 20 of hand-assisted nephrectomy were reported. Most cases were undertaken for non-function and RCC, with TCC and stones forming a smaller proportion. The mean (range) operative duration was 177 (89–335) min,

the median stay after surgery was 4.1 days, with a wide range, reflecting other than clinical reasons for discharge. Two deaths were reported (mortality of 0.8%). The mean conversion rate was 5.7% and the mean complication rate 14.5%. The complication and conversion rates were no higher in centres performing fewer than five cases per year than in the larger centres.

CONCLUSION

This first UK audit of laparoscopic nephrectomy has encouragingly revealed similar data to those reported in the rest of the world. The lack of a difference between smaller and larger centres may be explained by case selection and the use of mentors, as recommended by the BAUS Section of Endo-urology.

106

A prospective analysis of endoscopic management of upper tract TCC

N. SHAH, J.M. GLASS, R. SINGH, R.C. TIPTAFT and P. DASGUPTA
Guy's & St Thomas' Hospital, London, UK

INTRODUCTION

Nephroureterectomy remains the reference standard for managing upper tract TCC. We describe the endourological management of patients with upper tract TCC from our prospective database since 2000.

PATIENTS AND METHODS

A combination of flexible and rigid ureteroscopy was used; tumour was ablated after biopsy mostly with a holmium laser, and occasionally by conventional diathermy in the lower ureter. The follow-up included at least 3-monthly ureteroscopy until tumour-free, and thereafter at least 6-monthly.

RESULTS

Twenty-five patients underwent ureteroscopy for upper tract TCC; 11 had a conventional nephroureterectomy after the initial diagnostic ureteroscopy. Fourteen patients are currently under ureteroscopic surveillance (four women and 10 men, mean age 69 years, range 27–82). At initial presentation, 13 had haematuria (one microscopic), one loin pain, and eight had bladder TCC (including four with a previous history). Ten were in the left and four in the right ureter. The site of TCC included the calyx in three (two upper, one lower), the renal pelvis in four, and the ureter in seven (one upper, six lower). Histological subtypes included 10 with G1Ta, three with

G2Ta and one with G3Ta. The mean (range) follow-up was 16 (3–32) months and at the last follow-up 10 patients remained tumour-free, including the patient with G3Ta at initial presentation, who had other co-morbidities, and four who had superficial, non-progressive recurrences treated by holmium laser ablation. All patients had low-volume superficial disease.

CONCLUSION

Nephron-sparing surgery and careful ureteroscopic surveillance is a real alternative for managing low-volume superficial TCC of the upper urinary tract.

107

High-risk upper tract TCC: a multivariate analysis of risk factors

A. SKOLARIKOS, T.R.L. GRIFFITHS*, D.J. THOMAS, D.E. NEAL and J.D.G. KELLY†
*Departments of Urology, Newcastle Upon Tyne, *Leicester Hospital, and †Surgical Oncology, Addenbroke's Hospital, Cambridge, UK*

INTRODUCTION

Conservation of the upper urinary tract is feasible in patients with low-risk TCC (Ta G1 or GII). The aim of this study was to determine the effectiveness of radiological, pathological and cytological investigative procedures to

distinguish between high- and low-risk upper tract tumours.

PATIENTS AND METHODS

Between 1989 and 2001, 140 patients underwent nephroureterectomy for upper

tract TCC. Preoperative IVU (117), ultrasonography (89), retrograde pyelography (RP, 89), CT (81), ureteroscopic biopsy (51) and cytology (128) were evaluated with no knowledge of the final pathological status. High-risk TCC was defined as GIII or T1–T4 in the pathological specimen.

RESULTS

High-risk TCC was associated with nonfunction/hydronephrosis on IVU ($P=0.005$), stricture on RP ($P=0.012$), disease extending beyond the ureteric wall/lymphadenopathy on CT ($P=0.008$), GII/GIII on biopsy ($P=0.002$) and suspicious/positive cytology ($P=0.02$). Hydronephrosis/mass on ultrasonography and biopsy stage T1–T4 were not associated with high-risk TCC (Fisher's exact test). In a multivariate logistic

regression analysis, IVU ($P=0.004$) and CT ($P=0.01$) were independent predictors of high-risk TCC; RP did not add to IVU. In an analysis of biopsy grade and cytological status, only cytology was a significant predictor of high-risk disease ($P=0.009$). High-risk status on IVU, RP, CT, biopsy grade and cytology detected 57%, 16%, 44%, 94% and 54%, respectively, of the high-risk tumours. A combination of IVU, CT and cytology detected 79% (65/82) of the high-risk cases. The median follow-up was 26

months. Patients with high-risk tumours died significantly earlier from TCC than those with low-risk tumours (Cox regression; $P=0.01$).

CONCLUSION

CT and IVU provide independent information in predicting high-risk upper tract TCC. Cytological evaluation of exfoliated cells is a useful adjunct.