

PERCUTANEOUS CYSTOSTOMY IN PARAPLEGIA— A FOLLOW-UP OF 41 PATIENTS

By P. H. SMITH, M.B., F.R.C.S., J. B. COOK, M.D., F.R.C.P. and
A. A. BURT, B.Sc., M.D., Ch.B., M.R.C.P.

Leeds Regional Spinal Injuries Unit, Pinderfields General Hospital, Wakefield

Abstract. Percutaneous cystostomy using a fine calibre (9 Charriere) plastic trocar and cannula has been used in 51 male patients in the early weeks following spinal cord injury. The results are satisfactory. Of the last ten patients none has been catheterised per urethram; eight of these patients are now passing urine satisfactorily using a condom urinal.

PERCUTANEOUS cystostomy using a pre-sterilised fine bore (9 Charriere) plastic trocar and cannula is a development of the technique described by Riches in 1943. The results in 41 patients, 18 treated with the Bard S.P. angiocath and 23 with the Braun peritoneal dialysis catheter were reported to the French Urological Congress in Paris in 1974. They are summarised in Tables I and II and show that of the patients studied 46 per cent never developed infection of the urine during periods of catheterisation averaging 45 days.

The investigation was undertaken because of the demands on the time of medical and nursing staff made by the regime of intermittent catheterisation and our realisation that staffing levels in many units were probably inadequate for the effective use of this technique. The initial investigation by fine calibre suprapubic drainage was intended solely as a means of management in the acute stage following the spinal cord injury to prevent urinary infection without the use of antibiotics or urinary antiseptics. The method was confined to male patients, none of whom received any antibiotic or other chemotherapeutic agent as prophylaxis. Infection was assessed, a significant infection being indicated by the presence of 100,000 organisms per ml or by 5 cells per high power field in the presence of a positive culture. In this group of patients the cannula drained continuously and no routine was used to promote voiding but cystometrograms were performed using the suprapubic cannula in several patients and bladder contractions were demonstrated (Smith *et al.*, 1974). Our results have aroused some interest and we have been invited to produce this paper on the review of these patients, all of whom are now more than 3 years following spinal cord injury.

TABLE I
Duration of suprapubic drainage and life of each catheter

	Type of catheter		
	Supracath	Dialysis	Both
Patients	18	23	41
Duration of suprapubic drainage (average—days)	24	57	45
Life of each catheter (average—days)	11	26	—

TABLE IV

Urological follow-up of 26 patients treated with percutaneous cystostomy followed by intermittent catheterisation in 22 patients

Urine drainage—Condom—after TUR in 2 patients	23
Catheter—patients preference	3
Subsequent surgery	6
TUR bladder neck and external sphincter	5
Hydronephrosis	3
Residual urine	2
Pyelolithotomy	1
Changed to indwelling catheter	6
Penile sore	2
Preference	1
Reflux and pyelonephritis	1
Hydronephrosis	1
Recurrent sweating	1

TABLE V

Urological follow-up of 4 patients never catheterised following percutaneous cystostomy

Lesion	Age	I.V.P.	Urine	Drainage
C6 partial	54	Kidneys normal	Sterile	Condom
L4/5 partial	45	Kidneys normal	Sterile	Condom
D11 complete	40	Kidneys normal	Infected	Condom
C4 complete	17	Kidneys normal	Infected	Condom

RÉSUMÉ

On a utilisé chez 51 patients un trocart en plastique de fin calibre (9 Charrière) et une canule pour une cystostomie transcutanée dans les premières semaines qui ont suivi la lésion de la moëlle épinière. Les résultats sont satisfaisants. Aucun des dix derniers malades n'a été cathétérisé par l'urètre; huit d'entre eux urinent maintenant de façon satisfaisante avec un condom urinal.

ZUSAMMENFASSUNG

Percutane cystostomy mittels einer feinen kaliber (9 Charrière) plastik trocar und cannula ist in 51 männlichen Patienten während der frühen Wochen nach einer Rückenmarkverletzung gebraucht worden. Die Folgen sind befriedigend. Die lätzten zehn Patienten sind nicht per urethram katheterisiert worden; acht dieser Patienten lassen jetzt harn befriedigend mittels eines Urin condom.