



X-

:

1

: X-
) : (5), (1), (1
 .6 7 (: =2: 5)
 가
 : 5 2 . 5
 , 3 , 2 . 5
 35 . 2 . 1
 : X-

(1-4). X- (trabeculation)
 가 (5, 6). 가4 , 가
 가2 (case 2, 3) . 가
 5 (2 , 2 , 1) ,
 1 , (ureterolithotomy)
 X- 1 (Table 1). 4 가
 . 7 X-

1997 7 1998 2 7 lithotomy
 (Table 1). boric acid
 48 71 62 , 가2 , 가5 . lidocaine jelly Foley catheter
 . 6 , 3: 1 150cc
 5 , 1 (case 1) 3 가
 . 1 (case 4) 가 (Fig. 1A). Foley
 catheter (0.035inch, 150cm, Terumo
 Corp., Tokyo, Japan) Foley catheter

1998 11 4

1998 1 15

: X-

catheter(7F, 65cm, Cordis Corp., Miami, U S A) ,
 1 (case 5) renal catheter(5F, 80cm, Cordis
 Corp., Miami, U.S.A.)

(probing)

(Fig. 1B). 6 cobra

Table 1. Summary of the Cases

Case No.	Age Sex	Site	Initial Diagnosis	Previous Cystoscopy	Previous UreteralStent	Location	Time A (minute)	Time B (minute)	Results
1	69/F	Lt	Cervix Ca	Y	Y	UVJ		23	S
2	69/F	Lt	Ureter tuberculosis	Y	N		19	36	S
3	61/F	Rt	Colon Ca	Y	Y	mid ureter	29	58	S
4	49/M	Lt	Colon Ca	N	Y	mid ureter			F
5	48/F	Rt	Stomach Ca	Y	N		23	40	S
6	71/F	Lt	Cervix Ca	Y	N		6	17	S
7	67/M	Lt	Distal ureter stone	Y	Y	mid ureter			F

Time A : from bladder filling to selection of ureteral orifice

Time B : from bladder filling to completion of procedure

M : male, F : female, Lt : left, Rt : right, UVJ : ureterovesical junction

Ca : cancer, Y : yes, N : no, S : success, F : failure



A



B



C

Fig. 1. A 48-year-old woman(case 5) with right ureter metastasis from stomach cancer.

A. Interureteric ridge(arrows) is faintly seen after partial opacification of urinary bladder by diluted contrast.

B. Guide wire is successfully inserted into the distal ureter.

C. Double-J ureteral stent is successfully placed in the ureter.

(case 3)

5

가

7 5

5

17

58

35

(Table 1).

4

6

29

(24),

가

19

5

, 3

(6F,

X-

가

26cm, Cook, Bloomington, U S A)

(Fig. 1C), 2 가 (Amplatz goose neck snare, Boston Scientific Corp., Watertown, MA, U.S.A.)

가

(Fig. 2).

가

4

2

, 2

(case 1)

, 3

(case 3,

4, 6)

가

가

7

6

2

. 1

가

, 1

가

ureterolithotomy

2

, 1

2 (case 2,



A

B

Fig. 2. A 69-year-old woman(case 1) with left ureter invasion from cervical cancer.

A. Distal end of the ureteral stent is engaged by snare in the left distal ureter.

B. Double-J ureteral stent is removed by the snare.

3)

. X-

(8).

2

가 (5),

가 4-5

가

가

가

. 2

가

30

가

1 (case 1)

가

가

, 1 (case 3)

가

가

가

150ml

X-

6 cobra catheter
nal catheter
가

1 (case 5)

re-

가

가

X-

가

(5, 7).

가

가

6

29

가

가

X-

가

가

가

. Babel SG 1993

(5),

3

. Baere

10

1. Hepperien TW, Mardis HK, Kammandel H. Self-retained internal ureteral stents: a new approach. *J Urol* 1978;119:731
2. Boren SR, Dotter CT, Mckinney M, Rosch J. Percutaneous removal of ureteral stents. *Radiology* 1984;152:230-231
3. Smith AD. Retrieval of ureteral stents. *Urol Clin North Am* 1982;9:109-112
4. Mitty HA, Train JS, Dan SJ. Placement of ureteral stents by antegrade and retrograde techniques. *Radiol Clin North Am* 1986;24:587-600
5. Babel SG, Winterkorn KG. Retrograde catheterization of the ureter without cystoscopic assistance: preliminary experience. *Radiology* 1993;187:547-549
6. Yedlicka JW Jr, Aizpuru R, Hunter DW, Castaneda-Juniga WR, Amplatz K. Retrograde replacement of internal double-J ureteral stents. *AJR* 1991;156:1007-1009
7. Kikuchi Y, Graves VB, Strother CM, McDermott JC, Babel SG, Crummy AB. A new guide wire with kink-resistant and low-friction coating. *Cardiovasc Intervent Radiol* 1989;12:107-110
8. Baere TD, Denys A, Pappas P, Challier E, Roche A. Ureteral stents: exchange under fluoroscopic control as an effective alternative to cystoscopy. *Radiology* 1994;190:887-889

Fluoroscopically Guided Ureteral Catheterization : Preliminary Experience¹

H. J. Kim, MD., J. H. Oh, MD., Y. Yoon, MD., T. S. Seo, MD.

¹Department of Diagnostic Radiology, Kyung Hee University Hospital

Purpose : To evaluate the efficacy of fluoroscopically guided ureteral catheterization without cystoscopic assistance.

Materials and Methods : We evaluated seven patients(male:female= 2:5) who were candidates for percutaneous nephrostomy and noted the presence of ureteral strictures caused by metastasis from malignant tumors(n= 5), tuberculosis(n= 1) and previous ureterolithotomy(n= 1). In six patients, retrograde catheterization of the ureter under cystoscopic guidance was failed. Ureter selection was performed with a guide wire and ureteral stent after bladder distension using contrast media which visualized the interureteric ridge.

Results : Retrograde catheterization of the ureter was successful in five patients and failed in two. Ureteral stent insertion was performed in three of the five patients, and removal of migrated ureteral stent and insertion of new ureteral stent was performed in two. The mean total procedure time was 35 minutes. Ureteral catheterization failed in two male patients, who underwent percutaneous nephrostomy. An old blood clot was seen in one patient during the procedure, but no complications ensued.

Conclusion : Fluoroscopically guided ureteral catheterization without cystoscopic assistance is thought to be a useful procedure for the insertion of a ureteral stent in female patients.

Index words : Catheters and catheterization
Ureter, interventional procedures

Address reprint requests to : Hyoung Jung Kim, M.D., Department of Diagnostic Radiology, Kyung Hee University Hospital
Hoekidong 1, Dongdaemunku Seoul, 130-702, Korea.
Tel. 82-2-958-8622, Fax.82-2-968-0787, HJKIM@medikorea.net