

가

J

1

. . 1,2

: J 가
J
:
20 . J 7
1 6 , 24 - 70 ,
5 , 1 . , 8F Nelaton
neck snare J 가 . Goose -
stiff J , 0.035 "
Cobra . , 4F
stiff , Cobra
J
:
20 19 , 1
, J 가 가 .
J ,
가
1 J 가
가 , 2
:
가 J
Indwelling 10 , erosion
가 . fistula ,
(1 - 5). 6
J (6).
(7, 9).
가 , 가 (7).

¹

²

snare - catheter system dou - Japan)
ble - J (8). 4F Cobra
가 (Mallinckrodt, MO, U.S.A.)
J , ,

1996 1 1998 2
J 7 ,
20
. 1 6 24 - 70 . 7
. 6 (5 , 1),
1 . 1 - 3
, 1 - 3 (2.2)
povidone
. 8F Nelaton 가
Nelaton snare
가 Nelaton
, 1:2
. Goose - neck
snare (Microvena, MN, U.S.A.) Nelaton
J
가
(Fig. 1). 0.035 " stiff (Terumo, Tokyo,



Fig. 2. 4-F Cobra catheter is placed in the right renal pelvis and pelvocalyceal system is opacified by contrast material.

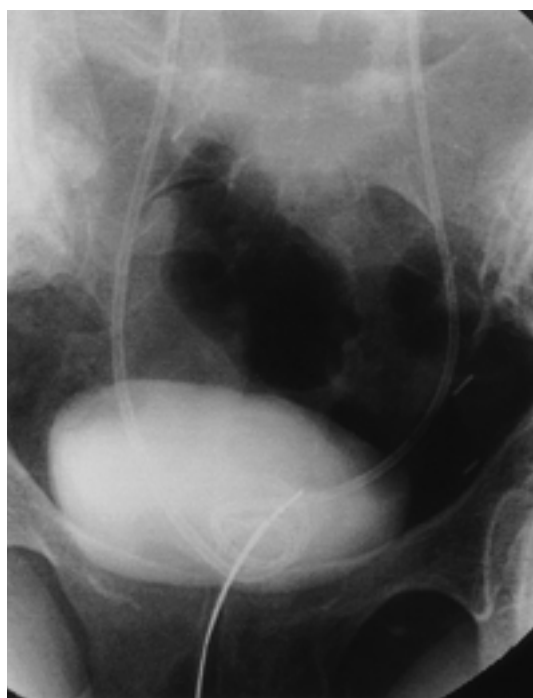


Fig. 1. Goose neck snare grasps the distal end of right double-J ureteral stent.

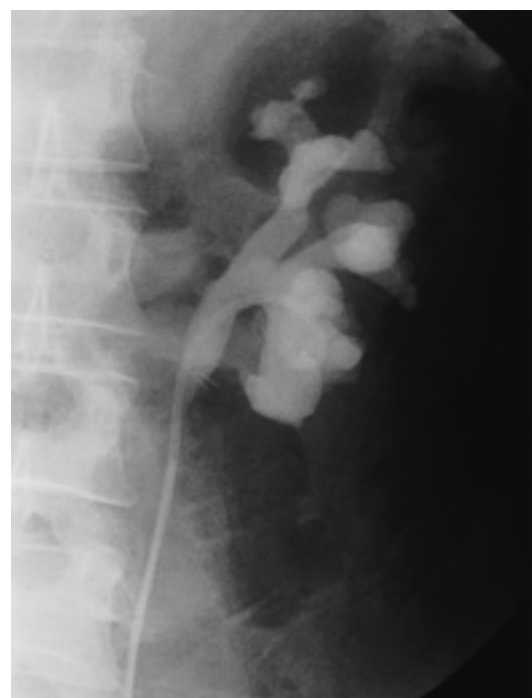


Fig. 3. The proximal end of new double-J ureteral stent loops in the right renal pelvis properly.

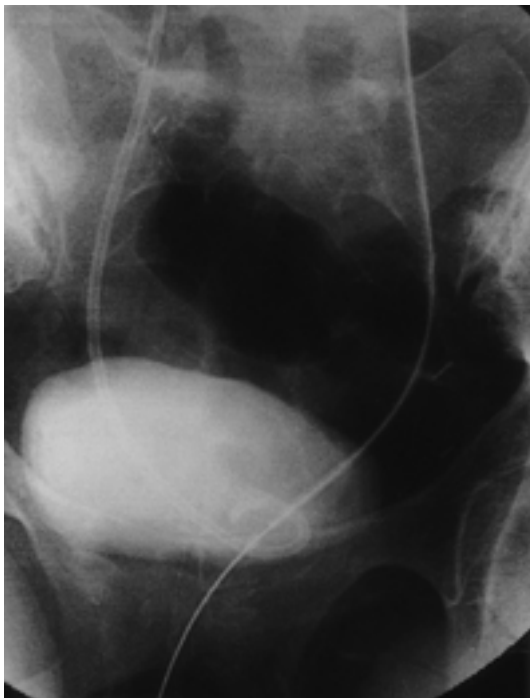


Fig. 4. Using the pusher, the distal end of new double-J ureteral stent is positioned in the bladder



Fig. 5. Finally, it is proper placement of new Double-J ureteral stent.

(Fig. 2). Cobra 가
, Cobra 20 - 24cm J (Cook Urological, Spencer, Ind)
J 가
(Fig. 3). pusher 가
pusher 가
(Fig. 4). J 가
(Fig. 5).

1 가
pusher loop
Nelaton 23 10 30 가 가
Goose - neck snare 가
20 2 가

20 19
(95%). 1
J
가 가
가 가
가 가, J
가 urinoma가

(7, 9).

: 가 J
 . 8F 가 , Joseph 24 가
 가 2 , 1 가
 가
 (10 - 12). , snare
 Snare - catheter system 1
 가 , .
 가 . 1
 가 , 가 . 1
 가 ,
 가
 (6). 20 - 25 (, pusher)
 가 . Snare - catheter 가 loop)
 system 가 .
 . Joseph 가
 24 2 .
 . 6
 snare - catheter system 2.2
 (8). Snare - loop system .
 lasso technique (7F hockey stick catheter ,
 folded 0.018 - inch guide wire system) 165
 97% (161/165) .
 가 (6). 가 14 가
 . Edward lasso technique , 가
 가 (13). Barre 가
 lasso technique 2가 Nelaton 8F
 (6). 가 18F .
 snare 가 .
 , 가
 가 snare 가
 가 가
 snare 가 가
 ,
 .
 7 1 , 20 , 가
 1 , , 가
 가 (6).
 , 가
 . 1 J 가
 , 가
 가 , 가
 가 .
 가 가
 가 .
 ,

2. Abber JC, Kahn RI. Pyelonephritis from severe encrustation or silicone ureteral stents: management. *J Urol* 1983;130:763-764
3. Salazar JE, Johnson JB, Scott RL. Perforation of renal pelvis by internal ureteral stents. *AJR Am J Roentgenol* 1984;143:816-818
4. Kar A, Angwato FF, Jhunhunwala JS. Ureterarterial and ureterosigmoid fistula associated with polyethylene indwelling ureteral stents. *J Urol* 1984;132:755-757
5. Walther PJ, Robertson CN, Paulson DF. Lethal complications of standard self-retaining ureteral stents in patients with ileal conduit urinary diversion. *J Urol* 1985;133:851-853
6. Barre 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
7. Smith AD. Retrieval of ureteral stents. *Urol Clin North Am* 1982;9:109-112
8. Yedlicka JU, Aizupuru R, Hunter DW, Castaneda-Zuniga WR, Amplatz K. Retrograde replacement of internal Double-J ureteral stents. *AJR Am J Roentgenol* 1991;156:1007-1009
9. Hepperlen TW, Mardis HK, Kammandel H. Self retained internal ureteral stents: a new approach. *J Urol* 1978;119:731
10. LeRoy AJ, Williams HJ, Segura JW, Patterson DE, Benson RR. Indwelling ureteral stents: percutaneous management of complications. *Radiology* 1986;158:219-222
11. Borsen SR, Dotter CT, McKinney M, Rosch J. Percutaneous removal of ureteral stents. *Radiology* 1984;152:230-231
12. Mitty HA, Train JS, Dan SJ. Placement of ureteral stents by antegrade and retrograde techniques. *Radiol Clin North Am* 1986;24:587-600
13. Edwards RD, Robertson IR. Transurethral ureteric stent retrieval using the Amplatz "goose-neck" snare. *J Vasc Interv Radiol* 1992;7:123-126

J Korean Radiol Soc 2000;43:305 - 309

Transurethral Exchange of Double-J Ureteral Stent Using Goose-Neck Snare¹

Chang Ho Kang, M.D., Yun Hwan Kim, M.D., Sung Bum Cho, M.D.^{1,2}, Chul Joong Kim, M.D.,
Hyoungh Rae Kim, M.D., Hong Weon Kim, M.D., Won Hyuck Suh, M.D.

¹Department of Diagnostic Radiology, Korea University College of Medicine

²Department of Diagnostic Radiology, Eulji College of Medicine, Eulji Hospital

Purpose: To evaluate the usefulness of transurethral exchange of double-J ureteral stent as an effective alternative to the cystoscopic approach.

Materials and Methods: There were 20 exchange cases involving seven patients (six women and one man) who initially underwent antegrade manipulation of a double-J ureteral stent. Indications for stent placement were ureteral stricture caused by malignancy in six patients [cervical carcinoma (n = 5), stomach carcinoma (n = 1)], and renal tuberculosis in one. An 8-F Nelaton catheter was inserted in the bladder via the urethra and contrast material was injected until the bladder was fully distended. The distal end of a double-J ureteral stent was extracted to the urethral orifice using a goose-neck snare and a 0.035 stiff guide wire was then advanced to the renal pelvis through the stent. After that, the stent was removed and a 4-F Cobra catheter was advanced to the renal pelvis along the guide wire. Contrast material was injected through the catheter, and the renal pelvis, calyx and ureter were opacified. The 0.035 stiff guide wire was again inserted via the catheter, a new double-J ureteral stent was inserted, and the catheter removed. Finally, the new double-J stent was properly located within the renal pelvis and the bladder.

Results: Double-J ureteral stents were successfully exchanged in 19 of 20 exchange cases. After the procedure, all patients reported tolerable, minimal lower abdominal pain.

Conclusion: Transurethral exchange of double-J ureteral stent is a useful alternative to cystoscopy.

Index words : Ureter, stents
Interventional procedures

Address reprint requests to : Yun Hwan Kim, M.D., Department of Diagnostic Radiology, Korea University Hospital
126-1, 5-Ka, Anam-Dong, Sungbuk-Ku, Seoul 136-705, Korea.
Tel. 82-2-920-5573 Fax 82-2-929-3796 E-mail: yhkku@netsgo.com

