

(8, 9)

가 ,

. 1988 Brothers (1) 가 가

.

2001 4 2002 10  
95 103  
가 53 ,  
가 42 .  
가 가 (2 - 5). 9 , 9 , 21 , 12 ,  
(5 - 7) 가 34 . (n=35), (n=5),  
(n=9), (n=54).

165

가 non-coring needle (Heparin sodium 100 IU/mL, )

59 , 44 가 (Cefamezin, Gentamicin: , )

3cm가 17

5cm (Glue ; Histoacryl N - butyl 2 - cyanoacrylate; BRAUN, Germany) 86

. 9.6 F (Bard Access System, Utha, U.S.A.) polyurethane

가 (preconnected type: n=39) peel away sheath가 ,

가 가 (attachable type: n=64) (Demerol , , ) 50 mg

2% (lidocaine HCl, , ) 24 (mal - position)

21 G ,

0.018 inch 5 38.3

F (sheath) . 5 F 12 F peel away sheath 1000 catheter

Valsalva peel away sheath day Fisher 's exact test, t - test Mann - Whitney test

(Vicryl , Johnson&Johnson, Netherland)

95 103 8 - 554 (mean: 159 , total catheter days: 17,872 )

( 205 )가 ( 153

**Table 1.** Comparison of Complications According to Approach Routes

	Subclavian Vein (N=40)	Internal Jugular Vein (N=63)	Total (N=103)	p-value
Early complication				
Pneumo- / Hemothorax	0	0	0	-
Transient Air Embolism	1	0	1	>.05
Transient Hematoma	1	0	1	>.05
Malposition	1	1	2 (A)	>.05
Late complication				
Catheter Occlusion	0	1	1	>.05
Migration	5	0	5	0.008
Infection*	3	8	11	0.02
Symptomatic Thrombosis	0	0	0	-
Mean length of time(days)	205	153	174	0.08

A: Attachable type of port, \* 0.61/1000 catheter days

)  
( $p=0.08$ ).  
25  
가 10 ,  
가 4 (3.9%, 0.22/1000 catheter days),  
가 11  
(10.7%, 0.61/1000 catheter days)  
가 15 (14.5%)  
36 가  
1  
peel - away sheath  
가  
가 1 가 100%  
5  
2  
peel - away sheath가  
가 1 가  
가  
1  
가  
가  
가  
가  
가 5  
가 3  
( $p=0.008$ ). 1 가  
2 가 (6, 7).  
1  
가  
가  
10  
11 (10.7%, 0.61/1000  
catheter days)  
7  
1  
2 2  
4  
2  
acinebactor jejuni가  
2  
가 peel away sheath 가  
가

:

2

가  
가 peel - away sheath  
가 .

가 .

가

가

가  
peel away sheath가 가

가

가 .

Hickmann catheter

가

42 - 80%

가 . 가

가

(7, 11, 12).

가

가

가 . ,

가

가

가

peel away

sheath

1

가

가

Vesely (10)

0.13% (15/11583)

100%

. ,

3

11.7%가

24%

(11),

가 valsava maneuver

peel away sheath

(3, 10).

valsalva

가 .

가

가

(11).

(fibrin sheath)

가

86

25

가

19

catheter pinch - off

(2.77/1000 catheter days)  
(0.21/1000 catheter days)가  
(13).  
가 5  
가 3  
가  
가  
가 11 (10.7%) 0.61/1000 catheter  
day  
가 68 -  
246 ( 161 , median 113 ) 1  
가  
가  
가  
가  
Hickmann catheter  
가  
가  
(cavi -  
Dacron cuff가  
가  
가  
가  
2  
3  
가  
Huber (non - cor -  
Huber  
ing)  
가  
(13%,  $p=0.008$ )  
가  
가  
3  
가 2 가  
가  
가  
가  
가

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## Implantable Central Venous Chemoport: Comparision of Results According to Approach Routes and Methods<sup>1</sup>

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**Purpose:** To evaluate the results and complications of placement of implantable port according to approach routes and methods.

**Materials and Methods:** Between April 2001 and October 2002, a total of 103 implantable chemoport was placed in 95 patients for chemotherapy using preconnected type ( $n=39$ ) and attachable type ( $n=64$ ). Puncture sites were left subclavian vein ( $n=35$ ), right subclavian vein ( $n=5$ ), left internal jugular vein ( $n=9$ ), right internal jugular vein ( $n=54$ ). We evaluated duration of catheterization days, complications according to approach routes and methods.

**Results:** Implantable chemoport was placed successfully in all cases. Duration of catheterization ranged from 8 to 554 days(mean 159, total 17,872 catheter days). Procedure related complications occurred transient pulmonary air embolism ( $n=1$ ), small hematoma ( $n=1$ ) and malposition in using preconnected type ( $n=2$ ). Late complications occurred catheter migration ( $n=5$ ), catheter malfunction ( $n=3$ ), occlusion ( $n=1$ ) and infection ( $n=11$ ). Among them 15 chemoport was removed (14.5%). Catheter migration was occurred via subclavian vein in all cases (13%,  $p=.008$ ). Infection developed in 10.7% of patients(0.61 per 1000 catheter days). There were no catheter-related central vein thrombosis.

**Conclusion:** Implantation of chemoport is a safe procedure. Choice of right internal jugular vein than subclavian vein for puncture site has less complications. And selection of attachable type of chemoport is convenient than preconnected type. Adequate care of chemoport is essential for long patency.

**Index words :** Catheters and catheterization, technology  
Catheters and catheterization, central venous access

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