

영구형 심방 조율 유도 이식을 위한 전진 기법의 유용성

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Usefulness of a "Push Technique" for Atrial Lead Implantation

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ABSTRACT

Background and Objectives : Dual-chamber pacing is commonly used as a pacing mode maintaining atrioventricular synchrony. However, traditional technique for atrial J lead implantation is relatively time-consuming and not easy to get optimal sites for both atrial and ventricular leads, especially for less experienced operators. We developed a new "push technique" for atrial J lead implantation. **Materials and Method** : This study included sixty-two consecutive patients (26 males 36 females, 55 ± 10 years, 56 patients received DDD and 6 received AAI pacemakers) from Jan. 1992 through Dec. 1996. Atrial J leads were implanted using a "push technique", that is, simply advancing a straightened lead while holding the stylet in the pacing lead at the junction of the superior vena cava and the right atrium. We evaluated the early and long-term result of atrial J lead implantation by the "push technique". **Results** : 1) Atrial leads were successfully inserted by the first or second trial of the "push technique" in the 62 patients (100%). The sensed P wave amplitude was 3.1 ± 1.0 mV, pacing threshold 0.6 ± 0.2 V at the pulse width of 0.5 ms, impedance 547.4 ± 118.5 ohms at 5 V. 2) During follow-up of 28.1 ± 15.7 months, significant changes in the pacing parameters and the dislodgement of atrial leads were not seen. **Conclusion** : The early and long-term result of atrial J lead implantation by the "push technique" was excellent. This "push technique" can be used as an easy alternative technique for atrial J lead implantation. (Korean Circulation J 1998;28(7):1091-1095)

KEY WORDS : Atrial lead implantation technique · Permanent pacemaker.

서 론

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(physi -

가 ologic pacing)

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(synchrony)
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1)
(pacing lead) J
(passive fixation) (screw)
J
J 가 J
stylet L
stylet 가
“ ” (“pull - back technique”)
2-8)
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9)
J
“ ” (“push technique”)
J
“ ”
재료 및 방법
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ACC/AHA 10)
1992 1 1996 12
164 “ ”
62 (38%, 26 , 36 ,
55 ± 10 , DDD 56 AAI 6)
12
(dislodgement)

Table 1. Clinical characteristics of the 62 patients

Age (year)	55.4 ± 10.8
Male/Female	26/36 (42/58%)
Indication for permanent pacemaker	
Complete AVB	38 (61%)
Mobitz II AVB	2 (4%)
SSS	22 (35%)
Pacemaker mode selected	
DDD	56 (91%)
AAI	6 (9%)
Atrial lead implantation	
Successful/Failed	62/0 (100/0%)
Sensed P wave amplitude (mV)	3.1 ± 1.0
Threshold (V)	0.6 ± 0.2
Impedance (ohms)	547.4 ± 118.5
Follow-up period (months)	28.1 ± 15.7
Atrial lead dislodgement during follow-up	0 (0%)

AVB : atrioventricular block, SSS : sick sinus syndrome.

(Table 1).

영구형 심박조율기 이식 방법

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가 4 mV 5 V
400~1000 ohms
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stylet 1
cm
(Figs. 1A and 2A)
가 J
(Figs. 1C and 2C).
가

가 0.5 ms 1.0 V
가 1.5 mV 5 V
400~1000 ohms

L

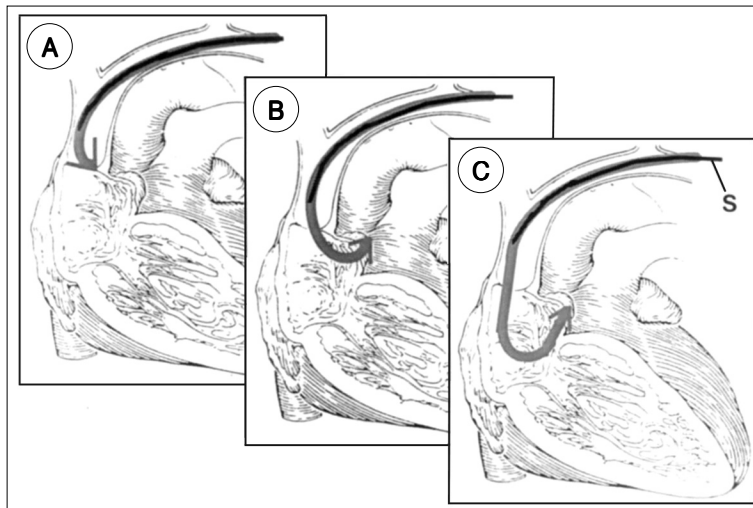


Fig. 1. Schematic illustrations showing a "push" technique for atrial J lead insertion. A straightened atrial J lead is positioned at the junction of superior vena cava and right atrium (A). By directing the tip anteromedially with a little withdrawal of the stylet (B) and simply advancing the lead while holding the stylet, the right atrial appendage is engaged successfully (C). Figures are modified from the figure in reference 7. S ; stylet.

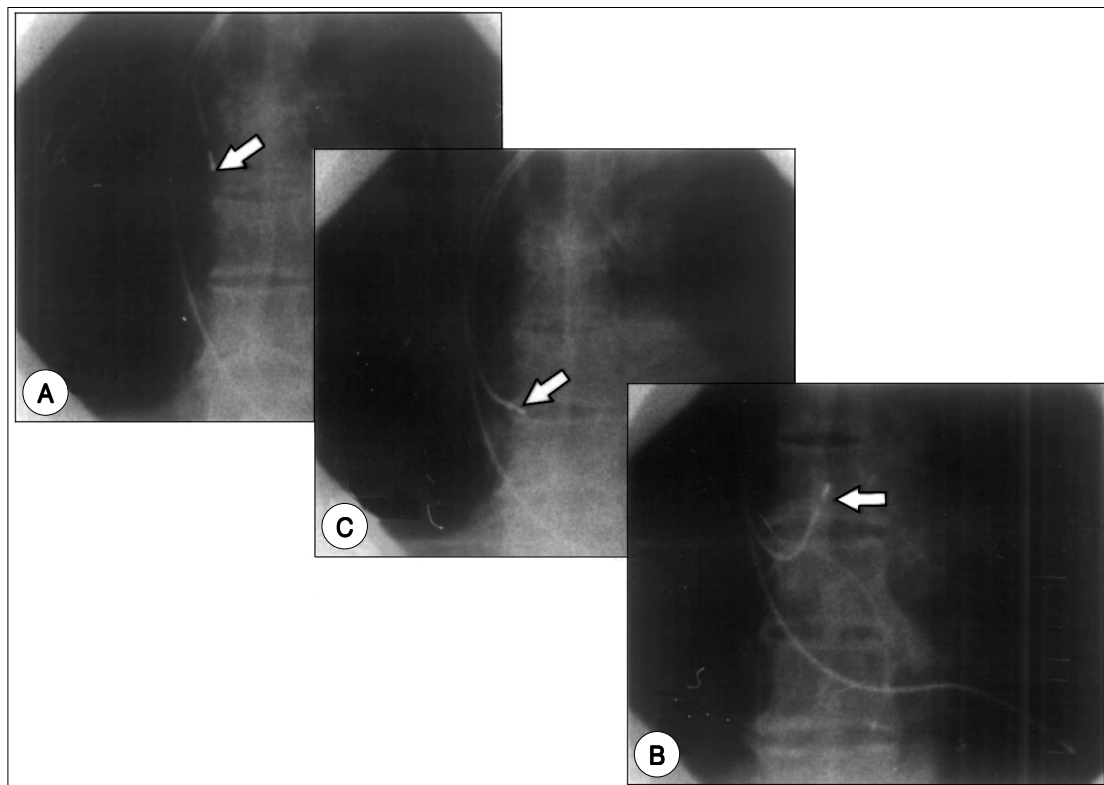


Fig. 2. An example of stepwise fluoroscopic images (anteroposterior view) showing the "push technique" for atrial J lead insertion in a patient with inserted ventricular lead and temporary pacing electrode. Explanations for the figures are same in Fig. 1.

심박조율기 이식 환자의 추적 및 관리

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1)

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62 (100%)

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3.1 ± 1.0 mV,

0.5 ms

0.6 ± 0.2 V, 5 V

$547.4 \pm$

118.5 ohms (Table 1).

2) 28.1 ± 15.7

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가

(Table 1).

가

고 찰

가

J

5%

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”(“push technique”)

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62

1~2

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28.1

± 15.7

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”(“pull - back technique”)

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 요 약

연구배경 :

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 재료 및 방법 :
 1992 1 1996 12 62
 (26 36 , 55 ± 10
 , DDD 56 AAI 6)가 . J
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가 .
 결 과 :
 1) 1~2
 62 (100%)
 3.1 ± 1.0 mV, 0.5 ms
 0.6 ± 0.2 V, 5 V 547.4 ±
 118.5 ohms .
 2) 28.1 ± 15.7

결 론 :
 “ ” J
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 중심 단어 :

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