

경피적 Stent 삽입술로 치료한 하지 허혈과 급성신부전이 합병된 대동맥 박리증

경희두 · 조덕규 · 고영국 · 윤영원 · 유승기
구본권 · 최동훈 · 장양수 · 심원흠 · 조승연

Aortic Dissection Complicated with Lower Extremity and Renal Ischemia Treated by Percutaneous Stent Insertion

Hee Doo Kyung, MD, Deok Kyu Cho, MD, Young Guk Ko, MD, Young Won Yoon, MD,
Sung Kee Ryu, MD, Bon Kwon Koo, MD, Donghoon Choi, MD,
Yangsoo Jang, MD, Won Heum Shim, MD and Seung-Yun Cho, MD

Cardiology Division, Yonsei Cardiovascular Hospital and Cardiovascular Research Institute,
Yonsei University College of Medicine, Seoul, Korea

ABSTRACT

A 62-year-old woman was admitted due to acute pain in the back and the right lower extremity. CT and angiography showed a chronic dissection of the ascending aorta and a newly developed dissection of the descending aorta complicated with ischemia of the left renal artery and right lower extremity. Therefore, a Wall stent was inserted percutaneously at the descending thoracic aorta and the stenotic left renal artery was opened by percutaneous transluminal renal angioplasty with a Mac (4.0 × 22 mm, Amg, Korea) stent. Thereafter, renal function was normalized and the blood pressure was better controlled at discharge. A follow up CT scan 3 months after the procedure showed patent true lumen of the descending thoracic aorta and left renal artery. (Korean Circulation J 2001;31(12):1330-1335)

KEY WORDS : Aorta ; Dissection ; Angioplasty ; Stents ; Renal artery obstruction.

서 론

가
가

DeBakey type III

가
. 1)

가

: 2001 8 7

: 2001 9 3

: 2001 9 24

: , 120 - 752

134

2-4)

5)

: (02) 361 - 7049 · : (02) 393 - 2041

E - mail : cdhlyj@yumc.yonsei.ac.kr

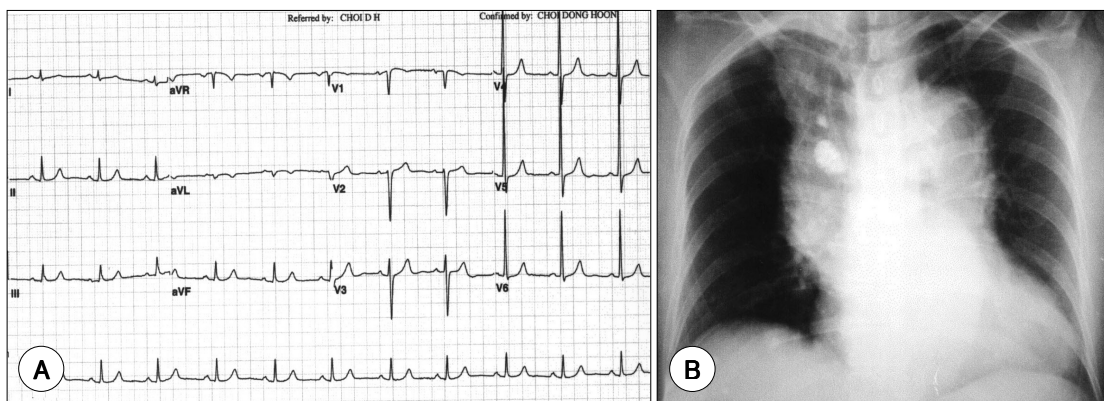


Fig. 1. Initial EKG (A) show normal sinus rhythm with left ventricular hypertrophy and initial chest x-ray (B) show mediastinal widening.

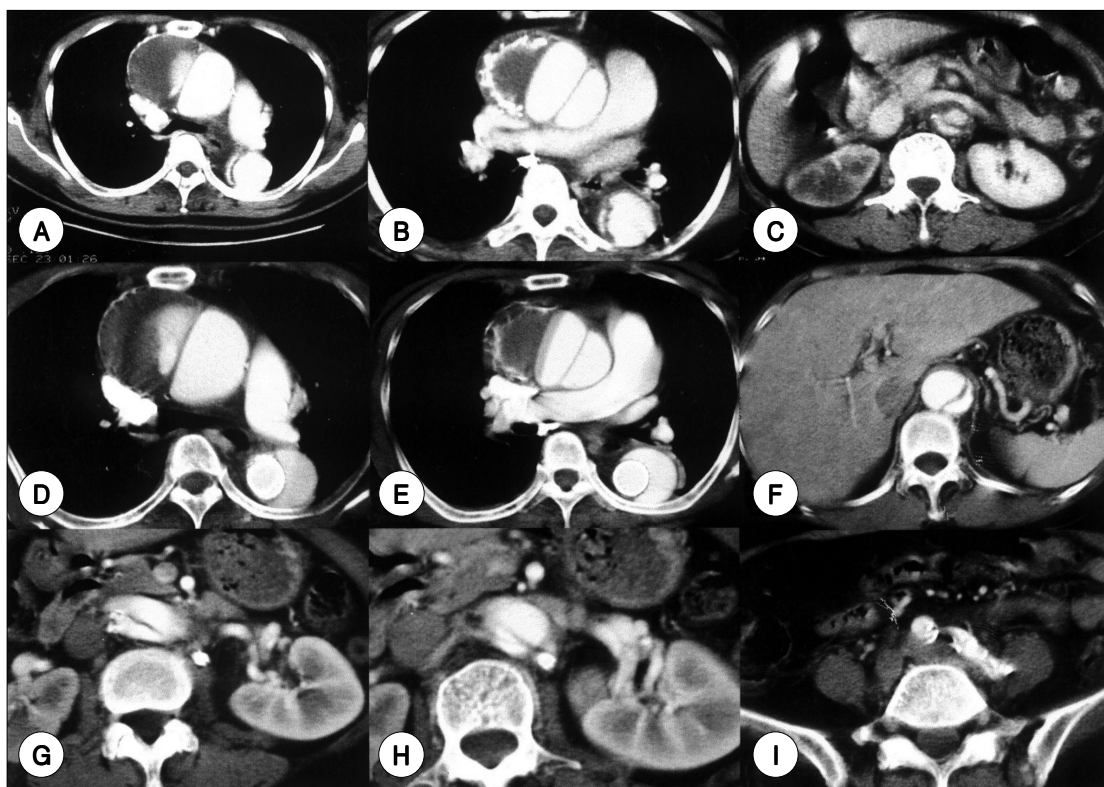


Fig. 2. Initial chest and abdominal CT scan (A-C) show dilated ascending aorta (=10c m) and descending aorta (=4.1 cm) separated with true lumen and false lumen by intimal flap. Follow-up chest and abdominal CT scan, 3 months after the procedure (D-I) show well preserved perfusion flow in the true lumen of descending aorta, both lower extremity and left renal artery and no more increased size of false lumen.

가 (coronary sinus) 가

170/90 mmHg 180/90 mmHg, 4 cm

BUN 38 mg/dL, creatinine 0.5 cm

3.4 mg/dL aspartate aminotransferase 가 가

alanine aminotransferase 229, 145 IU/L

(Fig. 1A) X

(Fig. 1B). 가 (Fig. 3A - C).

65%

10 cm (intimal flap) 7 F sheath

가

Wall - stent (22 x 100 mm, Schneider, Europe, Blach, Switzerland)

4.1 cm (Fig. 2A - C).

Wall - stent

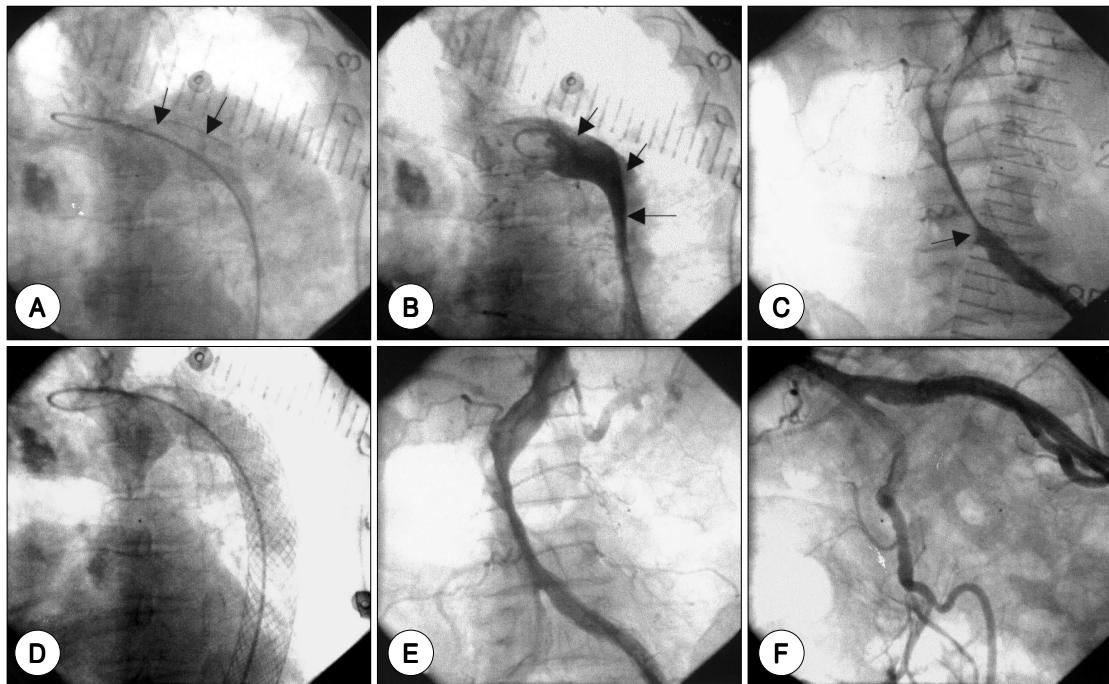


Fig. 3. Initial emergent aortography (A-C) show severely dilated ascending and descending aorta with intimal flap (arrow) from just below the left subclavian artery to right common iliac artery level and dynamic occlusion of true lumen by false lumen at whole descending aorta and left renal artery. Immediately after the percutaneous Wall-stent insertion at descending thoracic aorta (D-F), the perfusion flow into both lower extremity was improved but only partially filling in left renal artery with stenotic lesion (arrow) by false lumen.

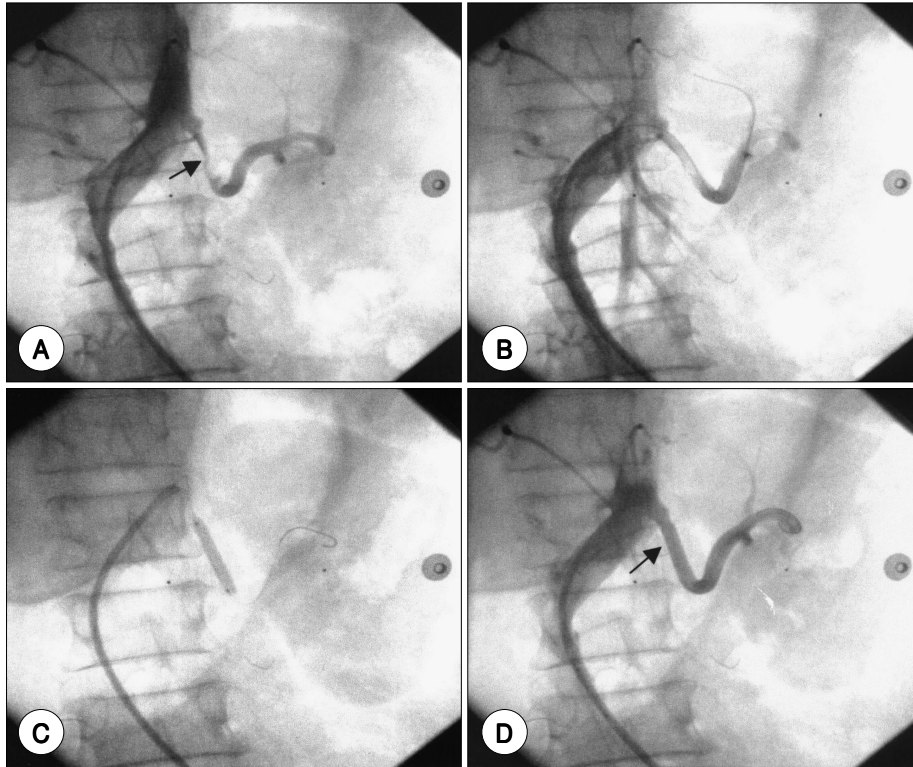


Fig. 4. After renal angioplasty with MAC-stent, follow-up angiography (A-D) revealed no residual stenosis (arrow) and no more flow limitation at left renal artery.

		가	isosorbide dinitrate	14
		(Fig.		BUN/
3D - F)	90%		creatinine 32.3/3.2 mg/dL	20
	80 mmHg	(pressure gradi -	mg/dL	29
ent)가	7 F	(guiding ca -		
theter)		(guiding wire)	가	가
		(ba -	가	가
lloon catheter, 5 × 20 mm)				(Fig. 2D - I).
		MAC		50
(4.0 × 22 mm, Amg, Korea)			BUN/creatinine	22.5/1.4 mg/dL
50%	가	(ba -		
lloon catheter, 5 × 20 mm, Maxxum, Boston Scien -		tific, USA)		
		(Fig. 4).	고	찰
6	doxazosin 12		30~50%	
mg, amlodipine 10 mg, captopril 150 mg, propran -			6)7)	
olol 160 mg, minoxidil 15 mg, candesartan 16 mg			60%	1)6)
torseamide 10 mg	nitroprusside			

가⁶⁾

가 Walker¹⁶⁾

50%⁶⁾⁸⁾

Lacombe¹⁷⁾

가 Williams^{2)9-11) 9)}

가

Slonim¹⁰⁾

3.4 mg/

dL

가

가

stent - graft

가

stent - graft

stent - graft

Wall - st -

ent Fann¹²⁾

가

8%

가

13)

가

가

14)15)

가

가

5)

가

가

가

가

요 약

62

가

Wall - stent (22 × 100 mm, Schneider, Europe, Bla - ch, Switzerland) Mac (4.0 × 22 mm, Amg, Korea)

중심 단어 : ; ; ; ;

REFERENCES

- 1) Fann JI, Miller DC. *Aortic dissection. Ann Vasc Surg* 1995;9:311-23.
- 2) Dake MD, Miller DC, Semba CP, Mitchell RS, Walker PJ, Liddell RP. *Transluminal placement of endovascular stent-grafts for the treatment of descending thoracic aortic aneurysms. N Engl J Med* 1994;331:1729-34.
- 3) Beregi JP, Prat A, Gaxotte V, Delomez M, McFadden EP. *Endovascular treatment for dissection of the descending aorta. Lancet* 2000;356:482-3.
- 4) Hama Y, Kaji T, Iwasaki Y, Hatori N, Kusano S. *Percutaneous treatment of brachiocephalic ischemic complications of a Stanford type A aortic dissection with use of endovascular stents. J Vasc Interv Radiol* 2000;11:1303-7.
- 5) Baert AL, Wilms G, Amery A, Vermeylen J, Suy R. *Percutaneous transluminal renal angioplasty: initial results and long-term follow-up in 202 patients. Cardiovasc Intervent Radiol* 1990;13:22-8.
- 6) Cambria RP, Brewster DC, Gertler J, Moncure AC, Gussberg R, Tilson MD, Darling RC, Hammond G, Mergeman J, Abbott WM. *Vascular complications associated with spontaneous aortic dissection. J Vasc Surg* 1988;7:199-209.
- 7) DeBakey ME, McCollum CH, Crawford ES, Morris GC Jr, Howell J, Noon GP, Lawrie G. *Dissection and dissecting aneurysms of the aorta: twenty-year follow-up of 527 patients treated surgically. Surgery* 1982;92:1118-34.
- 8) Miller DC, Mitchell RS, Oyer PE, Stinson EB, Jamieson SW, Shumway NE. *Independent determinants of operative mortality for patients with aortic dissection. Circulation* 1984;70:1153-64.
- 9) Williams DM, Lee DY, Hamilton BH, Marx MV, Narasimham DL, Kazanjian SN, Prince MR, Andrews JC, Cho KJ, Deeb GM. *The dissected aorta: percutaneous treatment of ischemic complications-principles and results. J Vasc Interv Radiol* 1997;8:605-25.
- 10) Slonim SM, Nyman U, Semba CP, Miller DC, Mitchell RS, Dake MD. *Aortic dissection: percutaneous management of ischemic complications with endovascular stents and balloon fenestration. J Vasc Surg* 1996;23:241-53.
- 11) Panneton JM, Teh SH, Cherry KJ Jr, Hofer JM, Gloviczki P, Andrews JC, Bower TC, Pairolero PC, Hallett JW Jr. *Aortic fenestration for acute or chronic aortic dissection: an uncommon but effective procedure. J Vasc Surg* 2000;32:711-21.
- 12) Fann JI, Sarris GE, Mitchell RS, Shumway NE, Stinson EB, Oyer PE, Miller DC. *Treatment of patients with aortic dissection presenting with peripheral vascular complications. Ann Surg* 1990;212:705-13.
- 13) Dean RH, Kieffer RW, Smith BM, Oates JA, Nadeau JH, Hollifield JW, DuPont WD. *Renovascular hypertension: anatomic and renal function changes during drug therapy. Arch Surg* 1981;116:1408-15.
- 14) Saito S, Arai H, Kim K, Aoki N, Tsurugida M. *Percutaneous fenestration of dissecting intima with a transseptal needle: a new therapeutic technique for visceral ischemia complicating acute aortic dissection. Cathet Cardiovasc Diagn* 1992;26:130-5.
- 15) Park JH, Chung JW, Cho YK, Kim SH, Ahn H, Oh BH. *Percutaneous fenestration of aortic dissection: salvage of an ischemic solitary left kidney. Cardiovasc Intervent Radiol* 1997;20:146-8.
- 16) Walker PJ, Dake MD, Mitchell RS, Miller DC. *The use of endovascular techniques for the treatment of complications of aortic dissection. J Vasc Surg* 1993;18:1042-51.
- 17) Lacombe P, Mulot R, Labedan F, Jondeau G, Barre O, Chagnon S, Judet O, Tcherdakoff P. *Percutaneous recanalization of a renal artery in aortic dissection. Radiology* 1992;185:829-31.