

# 흉부 대동맥류가 합병된 Behçet 증후군에서 Stent-Graft를 이용한 치료 1예

- 증례 보고 -

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## A Case of Transluminal Stent-Graft for Thoracic Aortic Aneurysm with Behçet's Syndrome

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### ABSTRACT

Behçet's syndrome is a multisystem disorder presenting with recurrent oral and genital ulcerations as well as ocular involvement. Vascular complications consist of venous thromboembolism, arterial aneurysms and occlusions, and they develop in about 25% of patients. Weakening of the aortic wall may lead to aneurysms that may rupture and cause life-threatening hemorrhage, but nothing in the surgical and nonsurgical techniques proposed for the treatment for aneurysms in Behçet's syndrome has proved to be satisfactory. The traditional treatment for thoracic aortic aneurysms is the surgical replacement of a prosthetic graft. Although advances in the operative care of patients with thoracic aortic aneurysms have been achieved, the associated morbidity and mortality are considerable, especially in those with coexisting conditions such as advanced age, coronary artery disease and heart failure. Currently, transluminally placed endovascular stent-grafts offer an alternative approach to treatment that is potentially less invasive with a lower risk. We report a 37-year-old male patient with thoracic aortic aneurysm associated with Behçet's syndrome. Transluminal endovascular stent-graft placement was attempted: the stent-graft was introduced through a 22-Fr sheath using a common femoral artery cut down and expanded to 25-30 mm in diameter. There was increased thrombosis of the aneurysm on a follow-up imaging study, and the patient was discharged without complications. (**Korean Circulation J 1998;28(5):812-818**)

**KEY WORDS** : Behçet's syndrome · Aneurysm · Aortic · Thoracic · Angioplasty · Stent-graft.

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Beh et's

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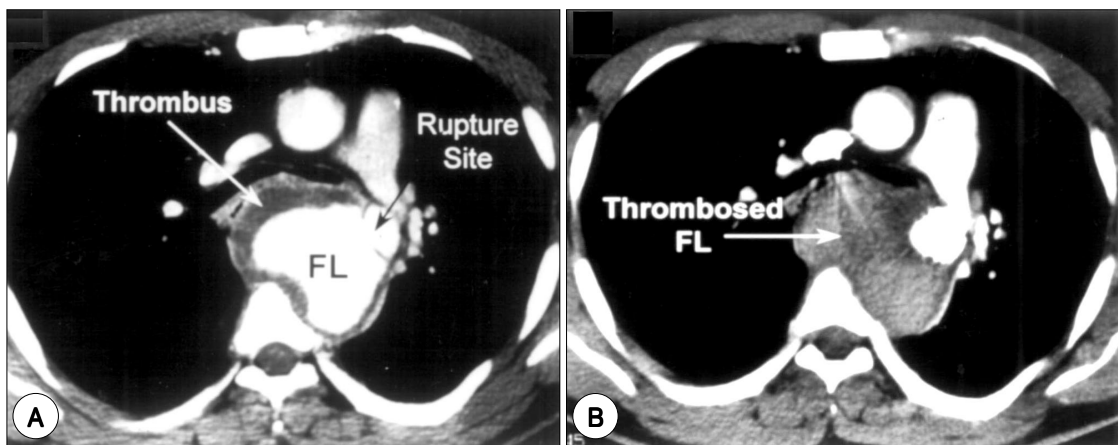
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Be-  
증례  
가 : , 37 .  
: .  
6) : 5  
가 : 21  
, 7  
, 가  
: 120/80 mm  
Hg, 150/90 mmHg, 140/80 mmHg  
81 / ,  
20 / , 36.5  
가 가  
10-15)  
Beh et  
가 16)17) Behçet 가 가  
: 12.2 g/dL, 38.8%, 9,800/ul  
( 63%, 28%, 5%, 3%),  
367,000/ul , 93mm  
/hr  
CRP 2.01 mg/dL, ASO



**Fig. 1.** A : Chest CT on admission revealed a huge saccular thoracic aortic aneurysm having false lumen filled with some thrombi at the level of bronchial bifurcation. B : Chest CT 3 days after procedure revealed that stent graft excluded the aneurysm successfully. Increased thrombosis of false lumen was observed.

36.8 IU/mL, RF , VDRL , ANA , Anti-DNA , ANCA , Circulating Immune Complex 2.19 ug/mL, IgG 2230 mg/dL, IgA 638 mg/dL, IgM 196 mg/dL , C<sub>3</sub>, C<sub>4</sub> . HLA A2, B39, B35, Cw3, DR4, DR15 , CMV, HSV, VZV

pathergy , , 10 cm 가

1A). 2 27 cm 27 cm 35 cm (Fig. 2A) 3

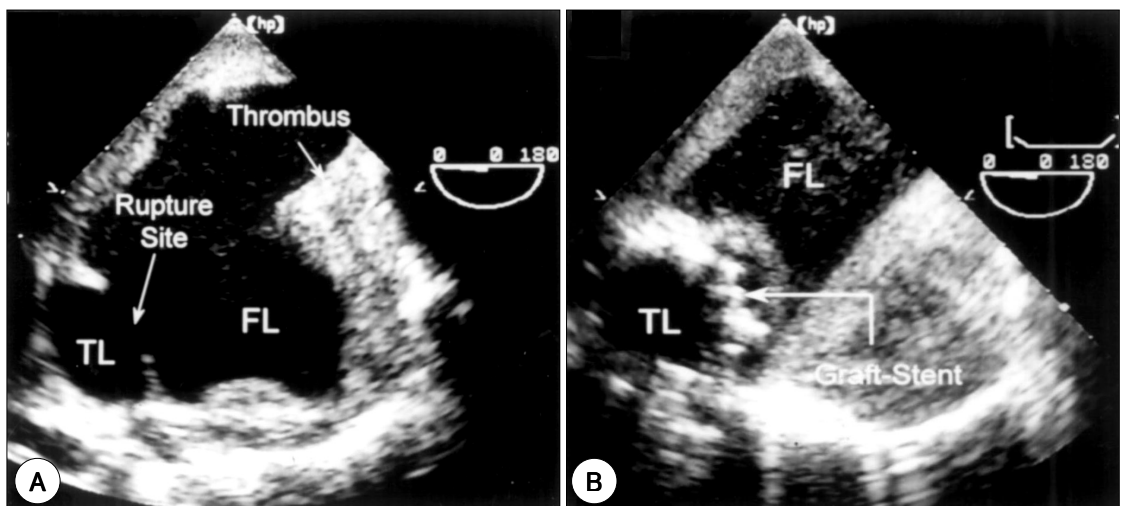
가 , umbilical tape , 18G needle , guide wire , guide wire 22 - Fr Keller - Timmermans sheath dilator , sheath dilator sheath 가 , stent - graft pusher , stent - graft 가

prednisolone 60 mg/day colchicine 1.2 mg/day

Stent - graft . Stent - graft

가 , 10~15% . Stent - graft stainless steel 304 Z 9 cm , polytetrafluoroethylene(PTFE, IMPRA, Temple, Arizona, USA) 30 mm, 25 mm , 5.0 polypropylene(Ethicon, Scotland) PTFE (Fig. 3).

8 Stent - graft



**Fig. 2.** A : TEE 2 days after admission revealed a huge saccular thoracic aortic aneurysm with echo drop-out of descending aortic wall at 27cm from incisor, suggestive of tear site. There was multiple thrombi inside the pseudoaneurysmal sac. B : TEE 2 days after procedure showed stent-graft at descending thoracic aorta with complete coverage of tear site. There was partial thrombosis of false lumen.

Stent-graft  
 graft  
 5-Fr multipurpose mu-  
 lti-sidehole catheter, stent-graft  
 (Fig. 4A and B).  
 stent-graft  
 2  
 stent-graft 가  
 , 가 , 가

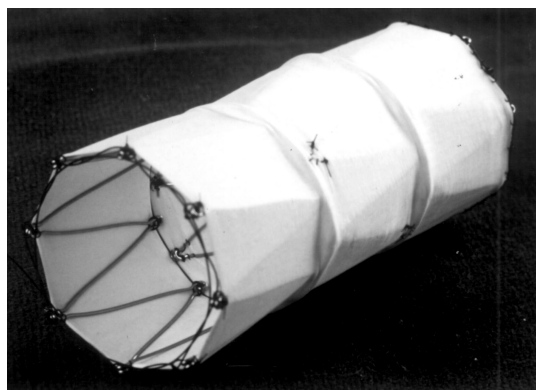


Fig. 3. Photograph shows self-expanding Z-shaped stent covered with polytetrafluoroethylene.

3  
 stent-graft 가 가  
 가 (Fig. 1B).  
 7 prednisolone 60 mg/day azathio-  
 prine 100 mg/day

고 안  
 Behçet  
 , , 1)  
 1/4 ,  
 , , ,  
 가 7%, 가 25%,  
 가 68% 2-4)  
 10.5%  
 가 가 18-20) Beh et  
 , , 가 ,

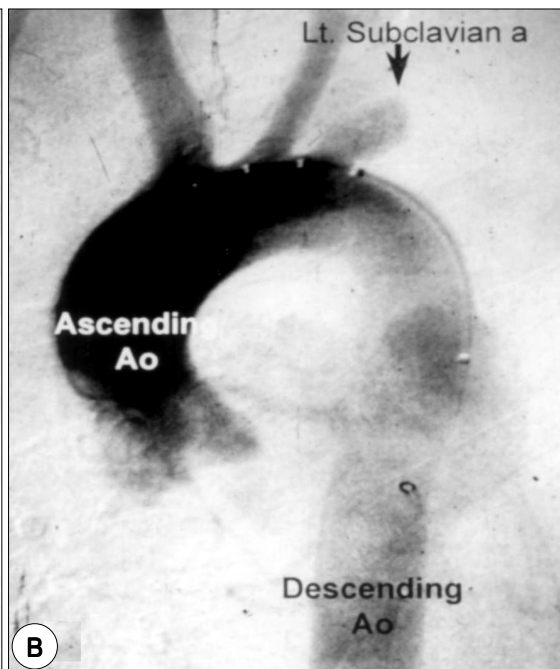
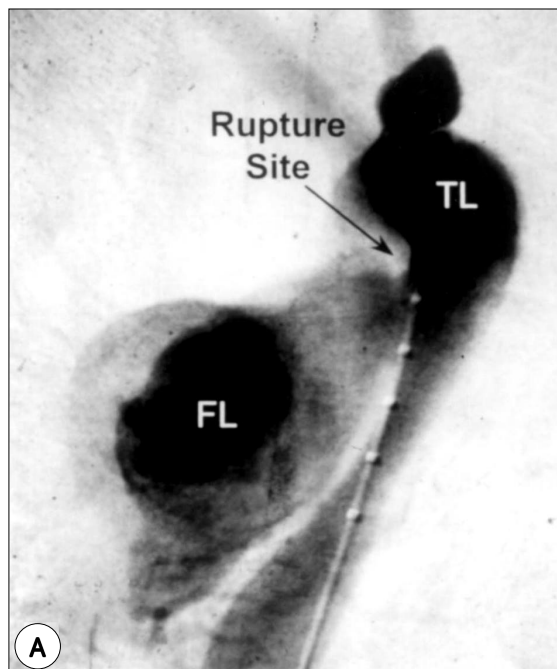


Fig. 4. A and B : Aortogram before and after stent-graft deployment displayed communication (arrow) between true and false lumen disappeared after the procedure.

Beh et <sup>3)5)</sup> 1969 Dotter가 graft <sup>10-15)</sup>

가

, CD8 , T <sup>22)</sup> stent - graft가

IgA - B 가 <sup>3)</sup> . Stent - graft

Beh et

1991 Becker , Parodi Palmaz

Dacron 5

<sup>23)24)</sup> Parodi 50

<sup>21)</sup> 8%, <sup>25)</sup> White May 53

81%, 3.7%

<sup>26)27)</sup> Chuter 22

55%, 45% <sup>28)</sup>

Moore Balm 10 31

80% 77% 74%

<sup>6)</sup> Beh et <sup>29)30)</sup> Blum

87%, 10%, 0.6%

46~74% 154

<sup>13)</sup> stent -

1 , 3 , 5 graft 가 가 , Dacron <sup>25)</sup>

<sup>6-8)</sup> 가 <sup>26)27)</sup> Dacron <sup>28)</sup> Dacron

32~47% <sup>6)</sup> 30

가 crown , 가

nitinol polyester

<sup>13)</sup> stent - graft

5~6% Gianturco , Rivera <sup>31)</sup>

PTFE , Rivera <sup>31)</sup>

Dake <sup>10)</sup> stent - graft . Stent -

graft 4~10

가, CRP 가 (38.0~39.7 )

50% <sup>7)</sup>

12% <sup>9)</sup> stent - graft

가 <sup>13)</sup>

가

stent - graft

graft  
가  
Beh et  
가  
가  
가  
omnic  
가  
stent - graft  
Park  
Beh et  
가  
Beh et  
가  
prednisone, chlorambucil, azathioprine, cyclosporine, colchicine  
, prednisone cyclophosphamide  
stent - graft  
sone azathioprine  
요 약  
37  
Beh et

중심 단어 : Behçet  
· Stent - graft.

REFERENCES

- 1) International Study Group for Behçet Disease. *Criteria for diagnosis of Behçet's disease. Lancet* 1990;335:1078-80.
- 2) Valente RM, Hall S, O'Duffy JD, Conn DL. Vasculitis and related disorders, in Kelly WN, et al (eds): *Textbook of rheumatology, 5th ed. Philadelphia, Saunders:1997. p.1114-6.*
- 3) Tunaci A, Berkmen YM, Gokmen E. *Thoracic involvement in Behçet disease: pathologic, clinical, and imaging features. AJR* 1995;164:51-6.
- 4) Koc Y, Gullu I, Akpek G, Kansu E, Kiraz S, Batman F, et al. *Vascular involvement of in Behçet disease. J Rheumatol* 1992;19:402-10.
- 5) Ahn JM, Im JG, Ryoo JW, Kim SJ, Do YS, Choi YW, et al. *Thoracic manifestations of Behçet syndrome: radiographic and CT findings in nine patients. Radiology* 1995; 194:199-203.
- 6) Cohn PF, Braunwald E. Disease of the aorta, in Braunwald E, et al (eds): *Heart disease, 5th ed. Philadelphia, Saunders;1997. p.1550*
- 7) Bickerstaff LK, Pairolero PC, Hollier LH, Melton LJ, Van Peenen HJ, Cherry KJ, et al. *Thoracic aortic aneurysms: a population-based study. Surgery* 1982;92:1103-8.
- 8) McNamara JJ, Pressler VM. *Natural history of arteriosclerotic thoracic aortic aneurysms. Ann Thorac Surg* 1978;26:468-73.
- 9) Monreno-Cabral CE, Miller DC, Mitchell RS, Stinson EB, Oyer PE, Jamieson SW, et al. *Degenerative and atherosclerotic aneurysms of the thoracic aorta: determinant of early and late surgical outcome. J Thorac Cardiovasc Surg* 1984;88:1020-32.
- 10) Dake MD, Miller CD, Semba CP, Mitchell RS, Walker PJ, Liddell RP. *Transluminal placement of endovascular stent-graft for the treatment of descending thoracic aortic aneurysms. N Engl J Med* 1994;331:1729-34.
- 11) Yusuf SW, Chuter TAM, Whitaker SC, Wenham PW, Hopkinson BR. *Transfemoral endoluminal repair of abdominal aortic aneurysm with bifurcated graft. Lancet* 1994;334:650-1.
- 12) Blum U, Langer M, Spillner G, Mialhe C, Beyersdorf F, Buitrago-Tellez C, et al. *Abdominal aortic aneurysms: preliminary technical and clinical results with transfemoral placement of endovascular self-expanding stent-grafts. Radiology* 1996;198:25-31.
- 13) Blum U, Voshage G, Lammer J, Beyersdorf F, Tollner D, Kretschmer G, et al. *Endoluminal stent-grafts for infrarenal abdominal aortic aneurysms. N Engl J Med* 1997; 336:13-20.
- 14) Lee DY, Chang BC, Shim WH, Cho SY, Chung NS, Kwon HM, et al. *Transluminal endovascular stent-graft for the treatment of aortic aneurysms. J Korean Radiol Soc* 1995; 33:361-6.
- 15) Shim WH. *Non-surgical treatment of abdominal aortic*

- aneurysm. *J Korean Med Assoc* 1994;37:1357-62.
- 16) Hirata I, Kimura S, Michihata T, Osawa H, Kume M, Kashima T. *A case of aneurysm of the descending thoracic aorta associated with Behçet's disease. Nippon Kyobu Geka Gakkai Zasshi* 1997;45:1173-7.
  - 17) Nakamura T, Shimamoto M, Yamazaki F, Yoshimura T, Ueno T, Shinozaki T. *A case of thromboexclusion for thoracic descending aortic pseudoaneurysm with Behçet's disease. Nippon Kyobu Geka Gakkai Zasshi* 1995;43:870-4.
  - 18) Eun HC, Chung H, Choi SJ. *Clinical analysis of 114 patient with Behçet's disease. J Korean Med Assoc* 1984;27:933-7.
  - 19) Song JH, Park SG, Choi SJ, Lee M, Yoo ES, Kim YI, et al. *Case of Behçet disease accompanied by abdominal aortic aneurysm. Korean J Intem Med* 1985;29:437-42.
  - 20) Kim BJ, Park SB, Lee IG, Song HS, Suh GK, Park SK. *One case of aortic aneurysm with multiple Arterial stenosis in Behçet's syndnome. Korean J Intem Med* 1985;28:135-40.
  - 21) Freyrie A, Paragona O, Cenacchi G, Pasquinelli G, Guiducci G, Faggioli GL. *True and false aneurysms in Behçet's disease: case report with ultrastructural observations. J Vasc Surg* 1993;17:762-7.
  - 22) Dotter CT. *Transluminally-placed coilspring endoarterial tube grafts: long-term patency in canine popliteal artery. Invest Radiol* 1969;4:329-32.
  - 23) Becker GJ, Benenati JF, Zemel G, Sallee DS, Suarez CA, Roeren TK, et al. *Percutaneous placement of a balloon-expandable intraluminal graft for life-threatening subclavian arterial hemorrhage. J Vasc Interv Radiol* 1991; 2:225-9.
  - 24) Parodi JC, Palmaz JC, Barone HD. *Transfemoral intraluminal graft implantation for abdominal aortic aneurysms. Ann Vasc Surg* 1991;5:491-9.
  - 25) Parodi JC. *Endovascular repair of abdominal aortic aneurysm and other arterial lesions. J Vasc Surg* 1995;21: 549-57.
  - 26) White GH, Yu W, May J, Stephen MS, Waugh RC. *A new nonstented balloon-expandable graft for straight or bifurcated endoluminal bypass. J Endovasc Surg* 1994;1: 16-24.
  - 27) May J, White GH, Yu W, Waugh RC, McGahan T, Stephen MS, et al. *Endoluminal grafting of abdominal aortic aneurysms: causes of failure and their prevention. J Endovasc Surg* 1994;1:44-52.
  - 28) Chuter TAM, Green RM, Ouriel K, Fiore WM, DeW- eese JA. *Transfemoral endovascular aortic graft plac- ement. J Vasc Surg* 1993;18:185-97.
  - 29) Moore WS, Vescera CL. *Repair of abdominal aortic an- eurysm by transfemoral endovascular graft placement. Ann Surg* 1994;220:331-41.
  - 30) Balm R, Eikelboom BC, May J, Bell PR, Swedenborg J, Collin J. *Early experience with transfemoral endovascular aneurysm management (TEAM) in the treatment of aortic aneurysms. Eur J Vasc Endovasc Surg* 1996;11:214-20.
  - 31) Rivera FJ, Palmaz JC, Encarnacion CE, MaNamara TO, Saseed M, Howard W. *Aneurysm and pseudoaneurysm balloon-expandable stent-graft bypass:clinical experience. J Vasc Interv Radiol* 1994;5:19.
  - 32) Park JH, Chung JW, Choo IW, Kim SJ, Lee JY, Han MC. *Fenestrated stent-grafts for preserving visceral ar- terial branches in the treatment of abdominal aortic aneu- rysms: preliminary experience. J Vasc Interv Radiol* 1996; 7:819-23.