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### Endovascular Management of Iliac Vein Compression Syndrome Associated with Thrombosis

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**Purpose:** We report our early experience, and the feasibility, of an endovascular technique for treating iliac vein compression syndrome, which is known to be caused by a chronic pulsating irritation of the iliac artery.

**Methods:** Five patients presented with acute deep vein thromboses in their left legs, diagnosed by computed tomography (CT), and treated with a catheter-directed thrombolysis. The residual stenosis was treated by angioplasty, followed by stent placement. The results were evaluated, followed with duplex ultrasound.

**Results:** The CT scan of the left iliac vein was compressed by the right iliac artery, with the thrombosis shown distal of the venous segment of the crossover point in all five cases. Success with the endovascular technique was achieved in all 5 patients. In the follow up, the duplex scan stent site and patency were examined. During the follow up period all the stents were patent, and no thrombosis recurred.

**Conclusion:** A CT scan is helpful in diagnosing iliac vein compression syndrome, with a thrombosis. The endovascular approach for its treatment should be considered affirmative due to its safety and simplicity. (*J Korean Surg Soc* 2003; 64:338-342)

**Key Words:** Iliac vein compression syndrome, Stent

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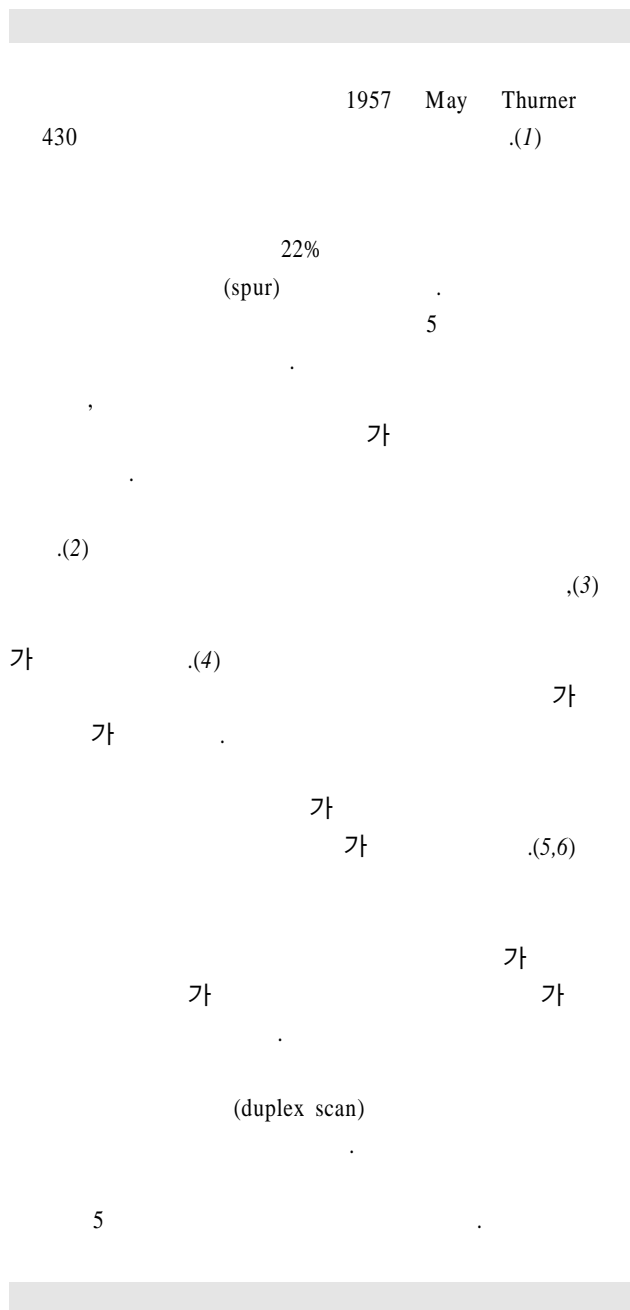
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(M.I.Tech, Seoul, Korea)  
3,000~4,000 unit  
100,000 unit , sheath  
60,000 unit (  
120,000 unit/hour)

1)  
가  
(protein C, S, antithrombin III) mm 12 mm Niti-S stent (Taewoong medical, Seoul, Korea)  
가  
GE Hi-Speed Advantage CT Scanner (General Electric Medical System, Milwaukee, USA) 3)  
10 mm coumadine  
25 mm 6 INR (International Normalized Ratio) 2~3 . 5  
Ultravist 300 (Schering, AG, Berlin, Germany) 100 ml 1 30 1

2)  
5 Table 1  
1) 1  
가 65 , 43 10  
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(Cook, Bloomington, USA) 가  
(single wall puncture technique) 6 French sheath (Fig. 1)  
. Kumpe Cobra  
(Cook, Bloomington, USA) ( , , )

**Table 1.** Characteristics of the patients

Patients	Age	Sex	Lesion site	Symptom duration (days)	Urokinase dosage	Stent	Follow-up (months)
1	54	Male	Iliofemoral	5	3,100,000	Yes	18
2	26	Male	Iliofemoral	14	8,000,000	Yes	12
3	43	Female	Iliofemoral	10	4,000,000	Yes	30
4	60	Female	Iliofemoral	3	2,100,000	Yes	2
5	55	Male	Iliofemoral	5	2,100,000	Yes	1

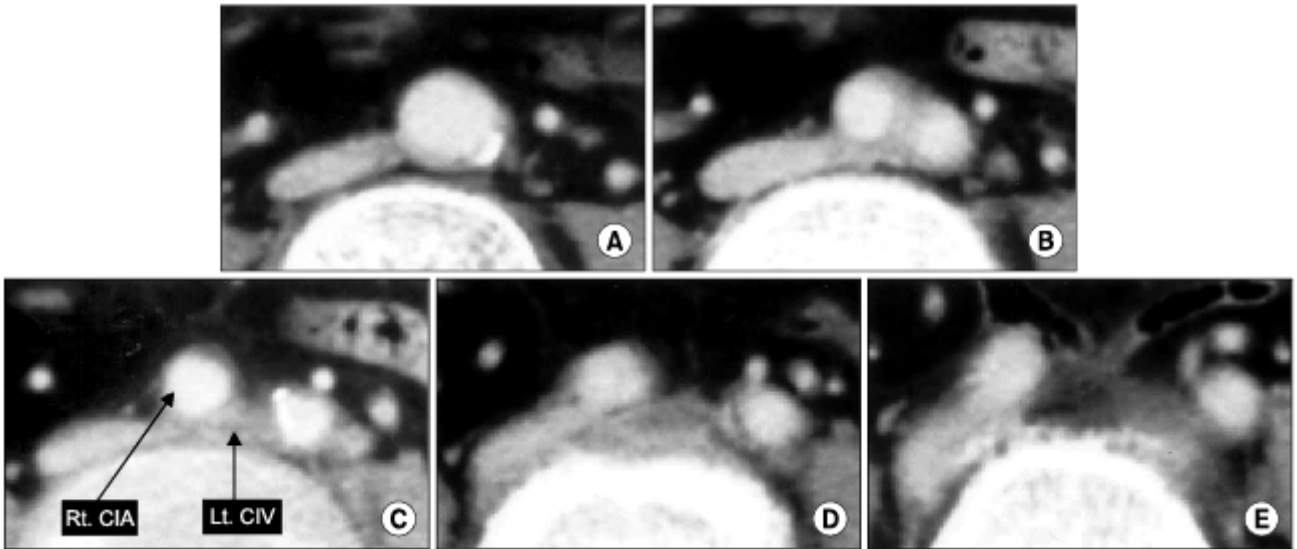


Fig. 1. A, B, C, D, E. The left iliac vein was compressed between right iliac artery and lumbar vertebra. And thrombus was seen distally.  
 Rt. CIA = right common iliac artery; Lt. CIV = left common iliac vein.

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 3 400  
 10 mm, 10 cm  
 Niti-S  
 . 30  
 2) 2  
 26 10  
 800  
 . 12  
 3) 3  
 54 5  
 2 316  
 12 mm, 10 cm Niti-S

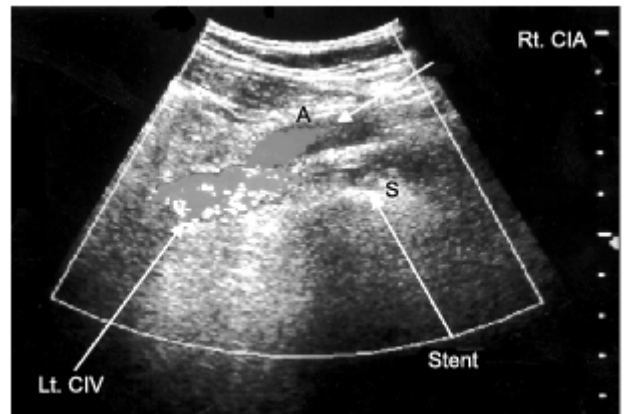


Fig. 2. Duplex scanning after stent insertion showed anatomic relation between iliac vein and artery.

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 (Fig. 2). 18  
 4) 4  
 60 3  
 210  
 12 mm  
 6 cm Niti-S (Fig. 3).  
 5) 5  
 55 5  
 210

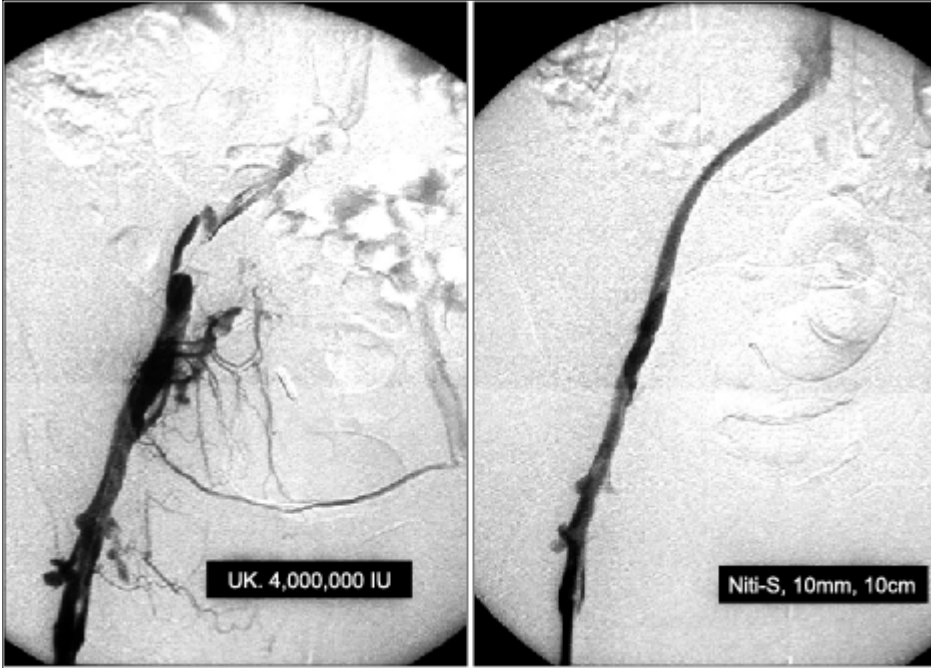


Fig. 3. Complete thrombolysis was achieved by urokinase and followed by stent placement.

12 mm 8 cm Niti-S

6)

,(3)

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.(7) Mickley (2)

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1/2 (30/61)

73%

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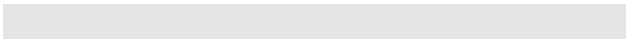
7)

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Lamont (8)

93%

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(5,6,8,9)

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(Intravascular ultrasound)

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(10)

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