

1

2

6

(intracavernosal arteriovenous
pseudoaneurysm)

fistula) , 3

4

가 6

가 50%

(1).

2가

6

30 (8-42)

(2)

가

2 - 14

1

가 (11)

(1-3).

(3)

(4-10).

2가

가

Acuson model 128(Mountain View, Calif) ATL model
ULTRAMARK 9(U.S.A.) , 7-MHz

(color gain)

가 가

2 (2,4)

4

6 5

(high O2 saturation) 1 (4

(low O2 saturation)

(Table 1) . 1 (4)

3

1998 8 4 1999 1 29

5-Fr 가 5 (6) , 1 (2) 24 50% 가 6 , 4.5 (Table 2). 1 (4) (internal pudendal artery) (Tornado coil ; 3 (glans-cavernosal, cavernoso-spongiosal, cavernoso-saphenous shunt) 1 4 (Table 2). 가 (Table 3), 2 (3, 4) 2 (1,6) (1) ; (2, 3) ; (4) ; (5, 6).

Table 1. Clinical Evaluation before Ultrasonography or Angiography

No.	Age (years old)	Onset	Clinical Symptom	Initial Cavernosal Blood Gas Analysis
1.	28	1week	Painless	High O2 saturation
2.	42	2weeks	Painful	High O2 saturation
3.	34	1day	Painless	High O2 saturation
4.	39	2days	Painful	Low O2 saturation
5.	33	6days	Painless	High O2 saturation
6.	8	1week	Painless	High O2 saturation

No. means number of patients.

가 (1,4), 가 가 , 가 (4,5). 가 가 (醫因性) (13). papaverine

Table 2. Angiographic Diagnosis and Selective Embolization

Patient No.	Angiographic Diagnosis	Embolic Material	Time of 50% detumescence	Erectile Restoration at Follow-up
1.	Fistula/Pseudoaneurysm at the proximal cavernosal artery to cavernosal sinuses	Gelfoam	3days	1 month
2.	Bilateral fistulous tract at the CA (Rt; bulous cavernosum, Lt; shaft)	Gelfoam	7days	1 month
3.	Fistula at the right proximal CA to cavernosal sinuses	Gelfoam & Coil	3days	4 months
	Fistula/Pseudoaneurysm at the left proximal cavernosal artery to cavernosal sinuses			
4.	Fistula/Pseudoaneurysm at right accessory penile artery to the bulbous cavernosum	Gelfoam	5days	3 months
	Fistula at the left penile artery to the bulbous cavernosum			
5.	Left cavernosal arteriovenous fistula	Gelfoam	4days	1month
6.	Left cavernosal arteriovenous fistula	Gelfoam	5days	1 month

CA means cavernosal artery.

(cavernosal si-
nusoid) 가 ,

(cavernosal aspiration),
gation)

(4).
,
(saline irri-

Table 3. Result of Doppler Ultrasonography

No.	Gray Scale US Finding	PV	Color and/or Power Doppler US Finding
1.	Dilated cavernosal sinuses	68	Color flow blush into right cavernosum
2.	Dilated cavernosal sinuses	35.3	Color flow blush from left mid-shaft CA into cavernosum
3.	Dilated cavernosal sinuses	120	Noncontributory for the detection of fistulous tract
4.	Dilated cavernosal sinuses	N	Noncontributory for the detection of fistulous tract
5.	Dilated cavernosal sinuse	54	Color flow blush from the right CA into cavernosum
6.	Dilated cavernosal sinuse	132	Color flow turbulence at the lacerated left CA

PV means peak systolic velocity of the cavernosal artery.

CA means cavernosal artery. N : not checked

(4-6).

(n = 3),
shunt; n = 1)
(7-10).

가

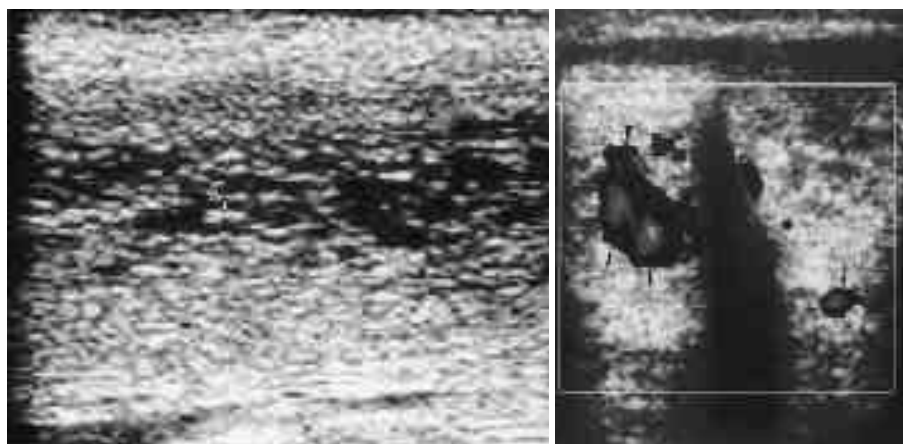
,

,

. Witt 7
(n = 3),
(spongiocavernosal
가

(4),

가 가



A

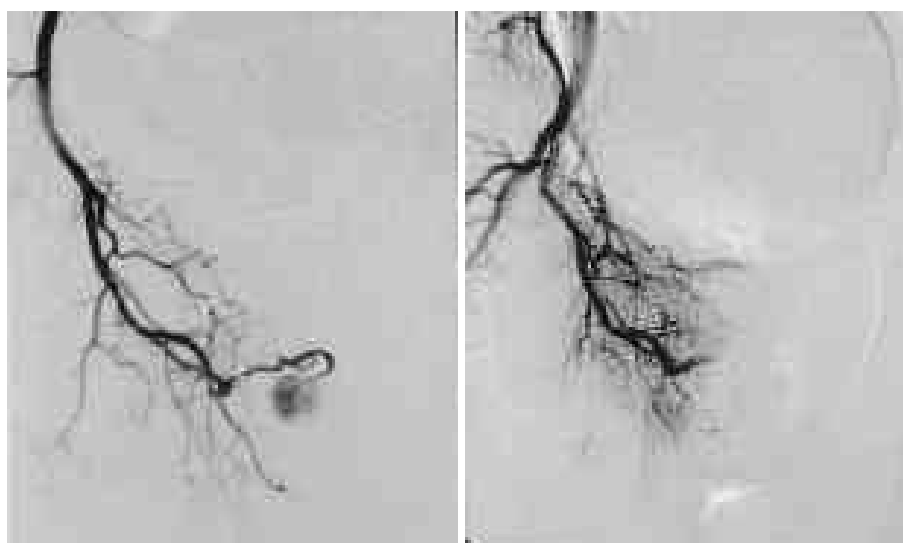
B

Fig. 1. A 28 year-old male patient complained of painless priapism.

A. Parasagittal gray scale image shows dilated cavernosal sinuses.

B. Coronal power Doppler image shows asymmetrical increased color flow within the right corpus cavernosum suggestive of pseudoaneurysm (arrowheads) and cavernosal artery (arrow).
C. Arterial phase of the right internal pudendal angiogram shows a contrast-filled cavernosal space suggesting pseudoaneurysm of the right proximal cavernosal artery.

D. After transcatheter embolization with gelfoam into the right proximal cavernosal artery, selective right internal pudendal angiogram demonstrates the successful embolization.



C

D

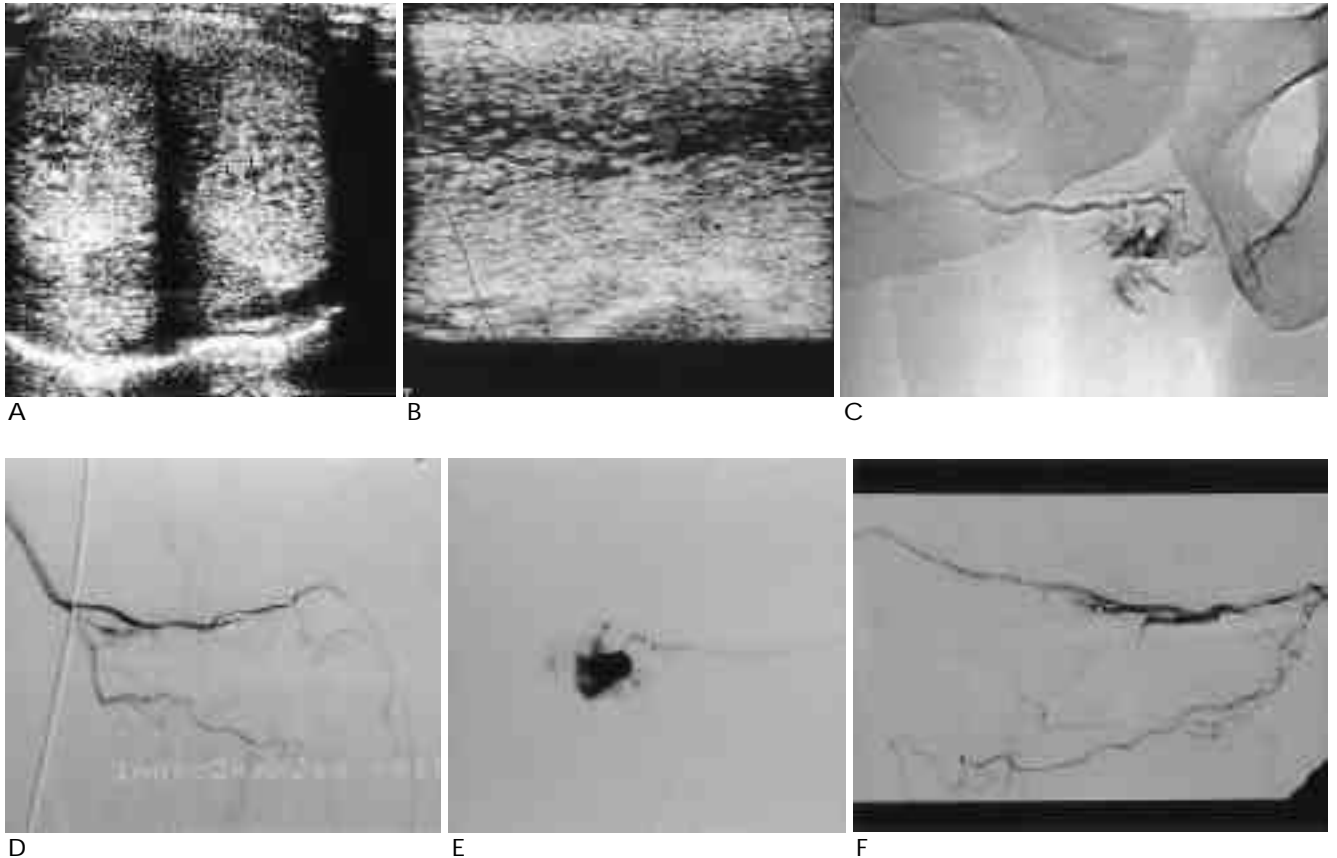


Fig . 2. A 34 year-old man was admitted to hospital because of persistent penile erection.

A. Transverse gray-scale ultrasonographic image of penis demonstrates the dilated cavernosal sinuses within both cavernosums(arrows).

B. Sagittal color Doppler image shows increased flow signals within the abnormally dilated cavernosal sinuses but, could not find the causative characteristic lesion.

C. Selective right common penile angiogram shows contrast blush at the ipsilateral corpus cavernosum.

D. After embolization with microcoil and gelfoam, successful embolization was demonstrated by right penile angiogram.

E. Left selective penile angiogram shows pseudoaneurysm at the left proximal cavernosal artery.

F. Left penile angiogram after embolization with microcoil and gelfoam demonstrates a successful embolization.

(4-10). ,

(guide)

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6 4

(Table

(1,2,5,6)

3).

. Feldstein

(14, 15)

(10).

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가

가

가

가

(7,11, 12,16,17). Autologous clot 가
6
1 (4,10)
(24) . 50%
() 4.5 (3-7) (7,8,11,12,16)
autologous blood clot (12,17)
, 2 (1-4)
가 , microcoil 1 (3)
4 bucrylate (17)
au-
tologous blood clot
가 ()
(10,16).
(recannalization)
()
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Therapeutic Effectiveness of the Superselective Arterial Gelfoam Embolization in Post-traumatic Arterial Priapism¹

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Purpose : We retrospectively evaluated superselective embolization with Gelfoam for the management of post-traumatic arterial priapism.

Materials and Methods : Six male patients with post-traumatic priapism underwent pudendal angiography and embolization. We evaluated the time and incidence of detumescence after embolization and compared normal erectile function and its duration with the results of other reports. In all patients, color Doppler sonography was performed pre- and post-angiographically.

Results : On pudendal arteriography, intracavernosal arteriovenous fistulas were observed in all patients, and pseudoaneurysm of the cavernosal artery (or common penile artery) in three. Detumescence and normal erectile function were achieved in all patients after superselective embolization. Using color Doppler sonography, the location of the lesion causing priapism was found, in four patients, to be the proximal or middle one-third of the cavernosal artery.

Conclusion : Pudendal angiography with superselective embolization with Gelfoam is a safe and effective method for the correction of post-traumatic arterial priapism.

Index words : Penis, US

Penis, diseases

Arteries, therapeutic blockade

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