

:  
 : 2004 3 2006 1 ,  
 11 (27 - 48 , :37 ) 2  
 , , ,  
 : (reverberation artifact)  
 . 가 가 4 (36%),  
 가 7 (64%) . 9 (82%) 7 , 2 (18%) 14  
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 : 가  
 2 .

가  
 가  
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 (1 - 3). 2004 3 2006 1 1 10 ,  
 , ,  
 26  
 (4 - 6). ,  
 , , 가 2  
 , 가 2 가 11  
 , 37 27 - 48 .  
 5 F

2.8 F (coaxial microcatheter)  
 (Progreat , Terumo, Tokyo, Japan) 355 - 710  $\mu$ m  
 polyvinyl alcohol (PVA) (Contour, Boston Scientific Corp.,  
 Natick, MA, U.S.A.)

10

2006 3 13

2008 1 18

가

PVA

2

1, 3

2

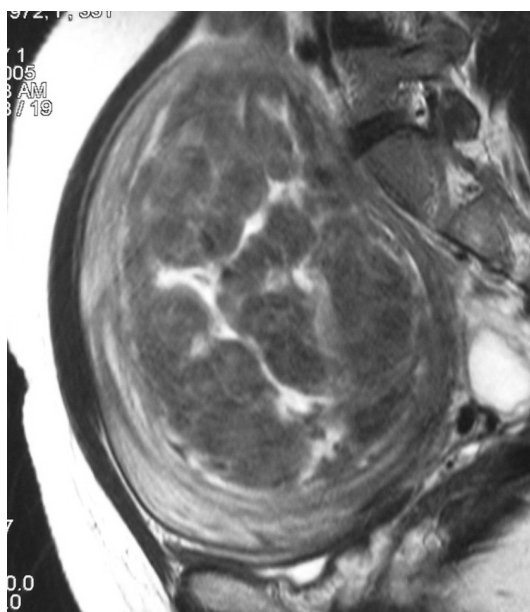
10

HDI

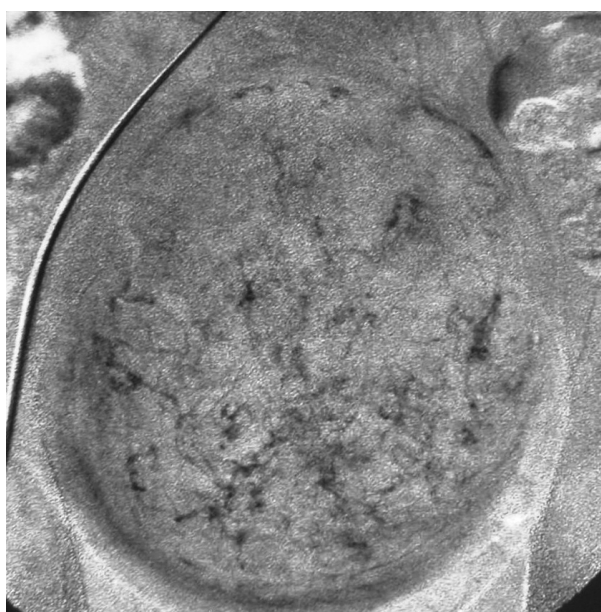
5000(Advanced Technology Laboratories, Bothell, Washington, U.S.A.) , 2-5 MHz

**Table 1.** Ultrasonographic Findings after Uterine Fibroid Embolization

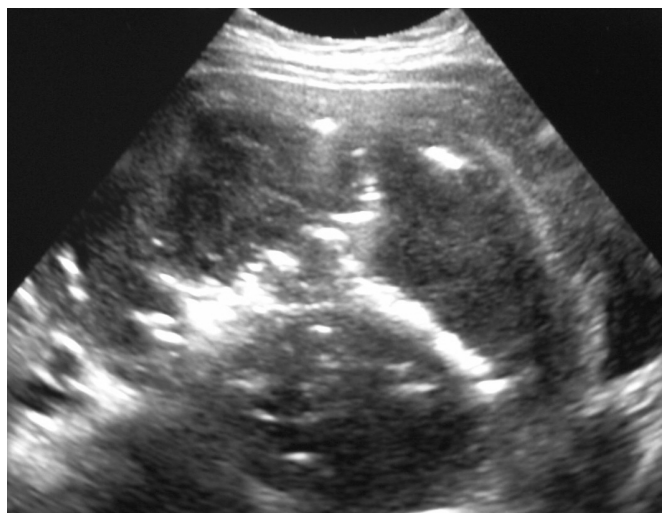
Ultrasonographic Findings		No of Patient(%)
Presence of air	myoma	11/11 (100)
	myometrium	0/11 (0)
Distribution pattern of air	branching linear	4/11 (36)
	numerous scattered	7/11 (64)
Time of air loss	7 day	9/11 (82)
	14 day	2/11 (18)
Fluid collection in uterine cavity	none	0/11 (0)
Color signal	none	0/11 (0)



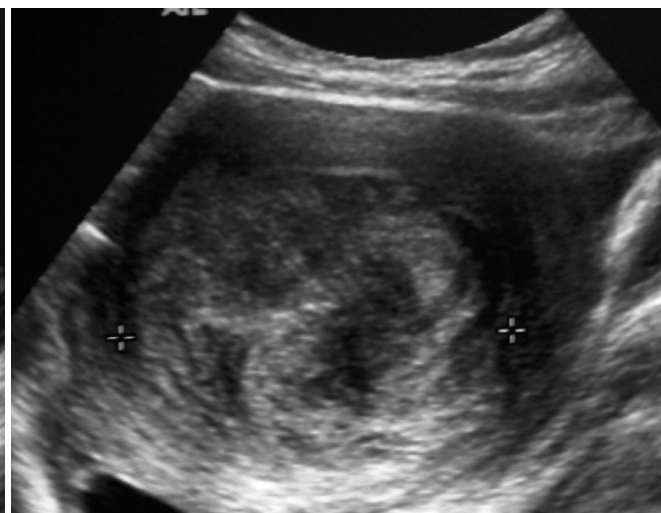
A



B



C



D

**Fig. 1.** A 32-year-old woman with huge uterine myoma.

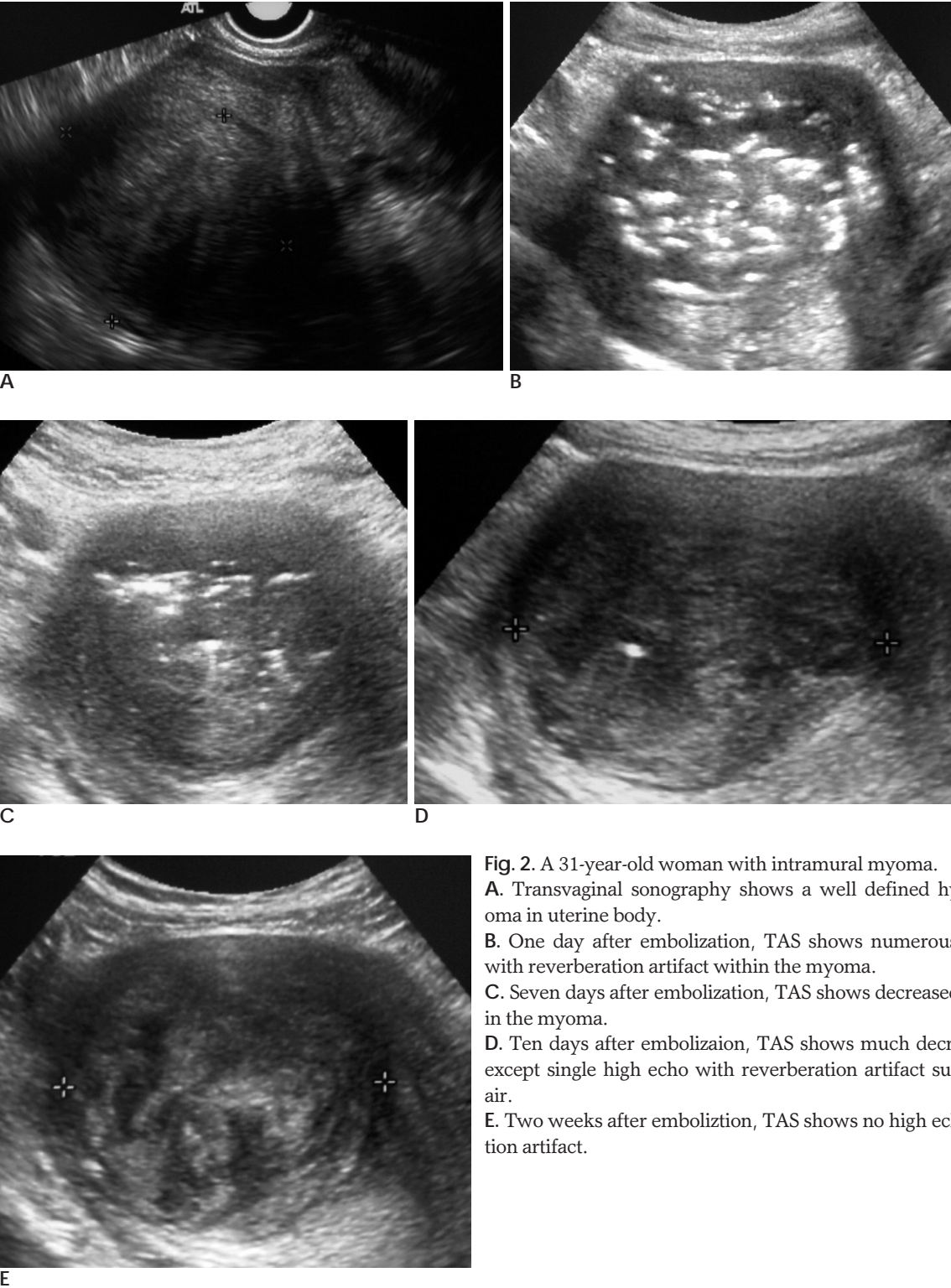
A. Sagittal T2-weighted MR image shows a 12 cm sized leiomyoma.

B. Pelvic aortogram of delayed phase shows a huge hypervascular tumor staining.

C. One day after embolization, transabdominal sonography (TAS) shows numerous branching linear echoes with reverberation artifact within the myoma.

D. Seven days after embolization, TAS shows no longer visible air shadow within myoma.

Table 1	11	(reverberation artifact)	(Fig. 1)		가	(Fig. 2).
			9 (82%)	7		
			2 (18%)	14		



**Fig. 2.** A 31-year-old woman with intramural myoma.  
A. Transvaginal sonography shows a well defined hypoechoic leiomyoma in uterine body.  
B. One day after embolization, TAS shows numerous scattered echoes with reverberation artifact within the myoma.  
C. Seven days after embolization, TAS shows decreased air shadow within the myoma.  
D. Ten days after embolizaion, TAS shows much decreased air shadow, except single high echo with reverberation artifact suggesting remained air.  
E. Two weeks after emboliztion, TAS shows no high echo with reverberation artifact.





(18).

, Worthington - Kirsch

(19)

1 - 2

(infarct)

(interstitial gas)

1 - 3

가

가

1

, 2

2

(posterior shadowing)

가

가

(hyperemia)

가

2

가

가

가

1

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## Early Ultrasonographic Findings after a Uterine Fibroid Embolization: The Value of Differentiate from Procedure-Related Uterine Infection<sup>1</sup>

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**Purpose:** To evaluate the early ultrasonographic (US) findings from the uterus and myoma after a uterine fibroid embolization (UFE).

**Materials and Methods:** From March 2004 to January 2006, eleven patients (27 - 48 years, mean: 37 years) with UFE to treat symptomatic uterine myoma, were retrospectively reviewed. A serial follow up gray-scale and color Doppler US were performed from one day to two weeks following a UFE. The US findings were evaluated for the presence and distribution pattern of air, time of air loss, and presence of fluid collection in the uterine cavity and color Doppler signal.

**Results:** Numerous high echoes with reverberation artifacts (which suggest air), were observed within the myoma (in all cases), one day after UFE. A branching linear echo pattern was observed in 4 cases (36%), whereas scattered echoes were observed in 7 cases (64%). Progressive loss of air, within 7 days of a UFE, was observed in 9 cases (82%), whereas 2 cases (12%) were observed within 14 days of a UFE. Abnormal fluid collection in the uterine cavity and a color Doppler signal within the myoma was not observed for all cases.

**Conclusion:** Branching or scattered echoes (suggesting air), are normally found within the myoma after a UFE, but these echoes disappeared within 2 weeks. These early US findings can be useful in differentiating from myoma infections after a UFE.

**Index words :** Uterine neoplasms  
Leiomyoma  
Ultrasonography, interventional  
Embolization, therapeutic

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