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: 2005 11 2006 12

9 2 11

14 55 32.3 7 11- , 4 8-

(cigarette

method)

3 6

: 11 66

25.1 . 11

. 3 6

:

(gynecomastia)  
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(4).

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(estrogen) (androgen) ( )

가 (2). 가 1 2005 11 2006 12

(1 - 3).  
(subcutaneous mastectomy)  
1980

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7 , 가 가  
14 55  
32.3 .

7

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. 7  
2.2×0.9 cm

(Fig. 1).

14 19

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cc 1% (1:10000)

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5cc

( Table 1 ) .

11

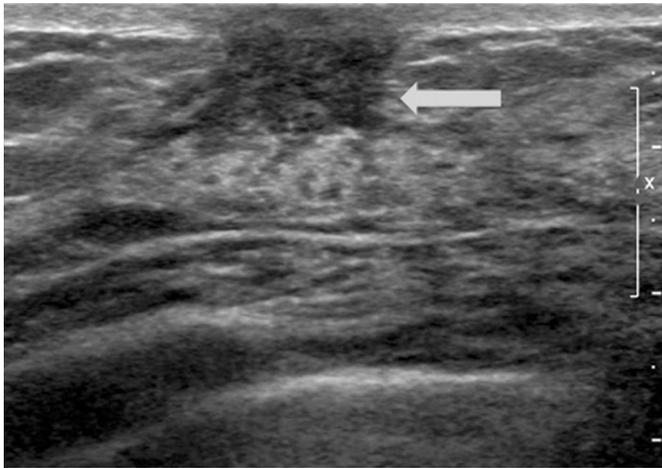
66

25.1

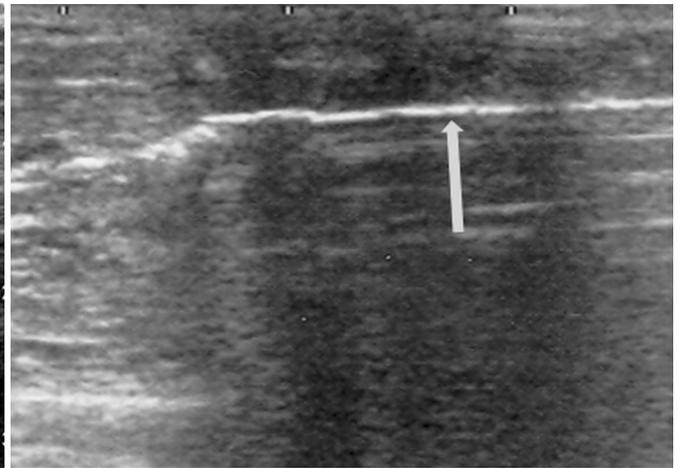
3 - 4 mm

(excursion)

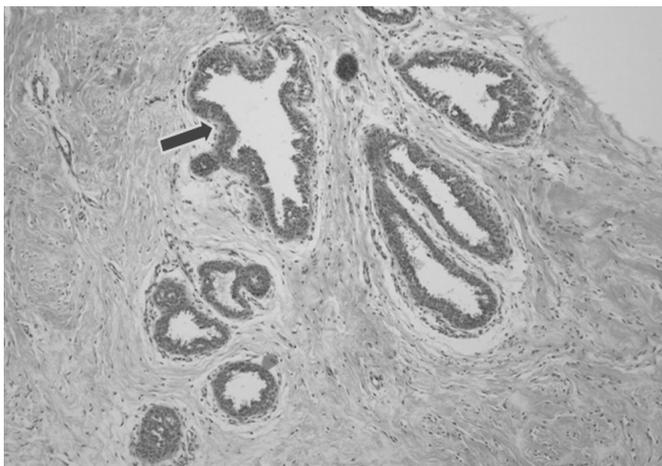
. 11



A



B



C

**Fig. 1. True gynecomastia in 47-year-old man**  
**A.** Ultrasonography shows a triangular - shaped hypoechoic glandular tissues at left subareolar area (arrow).  
**B.** During US-guided mammotome excision, linear hyperechoic needle (arrow) is located below the hypoechoic glandular tissues.  
**C.** In histologic examination, terminal ducts (without lobule formation) are lined by a multilayered epithelium with small papillary tufts (arrow). There is typically surrounding periductal hyalinization and fibrosis. (H & E stain, × 200)

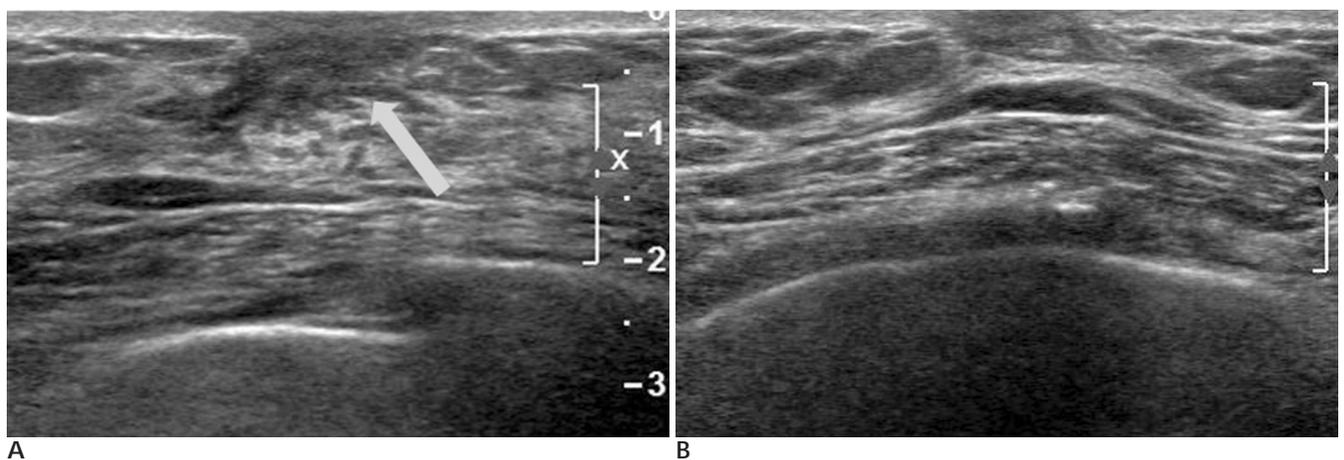
7 3 6 (5).  
 ( Fig. 2). 3가  
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 2 가  
 ( Fig. 가  
 3) . (chest lipodystrophy)  
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 (pseudogynecomastia)  
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**Table 1.** Summary of 11 Cases of US-Guided Vacuum-Assisted Removal of Gynecomastia

Case No.	Age	Size	Needle	Location	Pieces	Time (min)	Complication*
1	14	Not**	11G	Right	114	31	No
		Not**	11G	Left	107 3	7	No
2	19	Not**	11G	Right	126	39	No
		Not**	11G	Left	92	26	No
3	29	2.4 × 1.2 cm	11G	Right	20	15	No
4	36	2.8 × 0.7 cm	11G	Right	17	10	No
5	47	1.7 × 0.6 cm	11G	Left	30	16	No
6	55	0.8 × 0.5 cm	8G	Left	12	10	No
7	23	2.5 × 1.2 cm	8G	Right	68	30	No
8	23	3 × 1.6 cm	8G	Left	110	42	No
9	46	2.5 × 0.6 cm	8G	Left	30	20	No

Complication\*: complication after the vacuum-assisted removal 3 & 6months.

Not\*\*: not measurable because of diffuse palpability d/t obesity



**Fig. 2.** True gynecomastia in 28-year-old man.  
**A.** Initial ultrasonography shows a dendritic appearing hypoechoic glandular tissues at right subareolar area (arrow).  
**B.** Follow-up ultrasonography which is performed 6 months after the previous mammotome excision shows complete removal of the glandular tissues at subareolar area.



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## The Role of Ultrasound-Guided Vacuum-Assisted Removal of Gynecomastia<sup>1</sup>

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**Purpose:** To evaluate the role of performing ultrasound (US)-guided vacuum-assisted breast biopsies for the treatment (mammotome excision) of gynecomastia.

**Materials and Methods:** Between November 2005 and December 2006, nine male patients underwent US-guided mammotome excision for eleven cases of true gynecomastia. The patient ages ranged from 14 to 55 years (mean age, 32.3 years). US-guided mammotome excision was performed with an 11-gauge needle in seven cases and an 8-gauge needle in four cases. After the procedure, the cigarette method using gauze packing was performed. The number of samples, procedure time and presence of complications were evaluated. Scheduled follow-up physical and US examinations were performed after three and six months.

**Results:** For 11 cases of US-guided mammotome excision of gynecomastia, the number of samples ranged from 12 - 126 (mean, 66) and the procedure time ranged from 10 - 42 minutes (mean time, 25.1 minutes). Clinical significant complications did not occur immediately after the procedure and complications were not seen after a follow-up examination in any of the cases. At the 3- and 6-month follow up examinations, all of the patients showed a normal male physical appearance on a physical examination and there was no evidence of hypoechoic glandular tissues as seen on ultrasonograms.

**Conclusion:** US-guided mammotome excision is effective for the treatment of small, glandular true gynecomastia and is suggested as a new modality to replace the need for surgery or liposuction.

**Index words :** Breast, ultrasonography  
Gynecomastia  
Mammography  
Vacuum curettage

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