

EP-154

전흉근 보형물 기반 유방재건술에서  
포켓형 무세포진피기질(ADM)의  
ADM 사용량 감소 효과 :  
유방절제술 용적과 무관

(Pocket-Type ADM Reduces Acellular Dermal Matrix Utilization Independent of Mastectomy Volume in Prepectoral Implant-Based Breast Reconstruction)



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**Purpose:** As prepectoral implant-based breast reconstruction has become increasingly adopted, the use of acellular dermal matrix (ADM) has correspondingly increased. However, full wrapping with sheet-type ADM requires substantial material, raising concerns regarding cost and patient financial burden. This study compared surgical outcomes, operative time, and ADM utilization between pocket-type and sheet-type ADM in prepectoral implant-based reconstruction.

**Methods:** A retrospective analysis was performed on patients who underwent prepectoral implant-based breast reconstruction between January and December 2025. Intraoperative variables, including mastectomy volume, ADM amount used, and operative time, were evaluated. Postoperative complications were assessed.

**Results:** A total of 148 reconstructions were included (sheet-type, n=114; pocket-type, n=33). The mean ADM amount was significantly higher in the sheet-type group compared with the pocket-type group (298.3 ± 6.2 vs. 247.0 ± 9.0; p < 0.001). After adjusting for mastectomy volume, pocket-type ADM remained independently associated with reduced ADM usage, requiring approximately 62 units less ADM for the same mastectomy volume ( $\beta = -61.7$ ; p < 0.001).

No significant interaction between ADM type and mastectomy volume was observed. Postoperative complication rates did not differ significantly between groups.

**Conclusion:** Pocket-type ADM significantly reduces ADM utilization in prepectoral implant-based breast reconstruction while maintaining comparable surgical outcomes. This approach may alleviate patient financial burden without compromising safety.

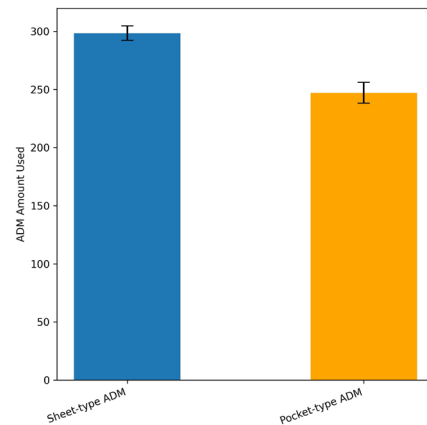


Fig. 1. Comparison of ADM amount used between sheet-type and pocket-type ADM groups.

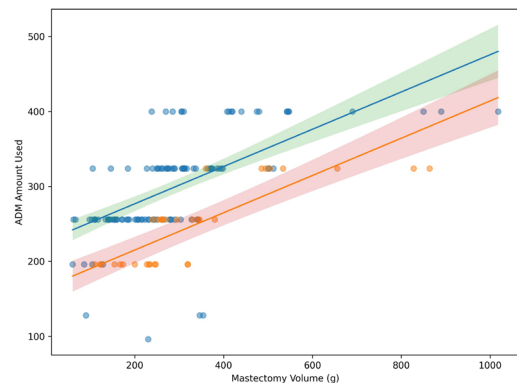


Fig. 2. Association between mastectomy volume and ADM amount used according to ADM type. Linear regression lines represent ANCOVA-adjusted models with parallel slopes. Pocket-type ADM demonstrated significantly lower ADM usage compared to sheet-type ADM after adjustment for mastectomy volume (p < 0.001)

Complications	Overall yes/N (%)	Group 1 yes/N (%)	Group 2 yes/N (%)	p-value
Seroma	3 (2.7)	3 (3.6)	0 (0.0)	1.000
Hematoma	1 (1.1)	1 (1.5)	0 (0.0)	1.000
Infection	6 (5.5)	4 (4.8)	2 (7.7)	0.625
Rupture	1 (0.9)	1 (1.2)	0 (0.0)	1.000
Contracture	10 (11.1)	9 (13.4)	1 (4.3)	0.442
Rippling	20 (19.2)	17 (21.0)	3 (13.0)	0.553
Animation deformity	1 (1.2)	1 (1.6)	0 (0.0)	1.000
Upper pole depression	42 (40.4)	36 (44.4)	6 (26.1)	0.179

Table. 1. Postoperative complication rates were not significantly different between the sheet-type(n=114) and pocket-type(n=33) groups.