

Three Years of Experience with bovine pericardium matrix: Expanding the Indications for Prepectoral Reconstruction

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MBN2025

Introduction

Immediate prepectoral reconstruction (IPR) using a biological matrix is a widely used procedure. The most commonly used criteria for the use of matrices are those published by ABS-BAPRAS. However, its use in Europe has declined in recent years due to the emergence of alternatives, such as microthane-coated prostheses.

Materials and Methods

This is a prospective database of retrospective cohort of IPR patients who underwent Exaflex biological matrix performed at CHUVI between 2022 and July 2024.

Study population	
Patients	80 (112 breast)
Age (mean)	51 years
BMI (mean)	24,3 Kg/m ²
Smokers	18,75%
Pinch >15 mm RM	69,1%
Preoperative RT	2,5%
Postoperative RT	32,1%
Most frequent mastectomy	NSM 92,9%
Prepectoral reconstruction	100%
Breast weight (mean)	212,8 g
Prosthetic volume (mean)	327 cc
Associated axillary surgery	SLNB 55,4%
	ALND 5,3%

Results			
Seroma	5,4%	Capsular contracture	2,67%
Haematoma	8%	Animated deformity	0%
Wound infection	6,25%	Cosmetic reoperation	10,7%
Prosthesis infection	4,46%	Reconstruction failure	1,78%
Skin necrosis	7,14%	Mean follow-up	15,6 months
Rippling	9,8%	Median follow-up	13 months

Discussion

Although biological matrices have facilitated the expansion of the prepectoral plane, their usefulness has recently been called into question due to the improvements in surgical techniques and the development of prosthetic materials. However, given their properties and the results obtained, we believe that they could be indicated for patients who undergo skin- and nipple-sparing mastectomy with minimal pinch, who have small breasts, and associated comorbidities (high-risk patients), where the aesthetic results of other reconstructions (e.g., microthane) are unsatisfactory.



Conclusions

IPR with Exaflex is a safe and reproducible procedure with good results. The most commonly used criteria (ABS-BAPRAS) seem too restrictive. Based on the results obtained, patients most likely to benefit most from its use are those with an indication for skin- and nipple-sparing mastectomy with associated risk factors.