

Surgical Treatment of Capsular Contracture(CC): Literature Review and Outcomes Utilizing Implants in Revisionary Surgery

Zingaretti et al., 2021

Introduction

About capsular contracture

Capsular Contracture occurs when the collagen-fiber capsule which normally forms around the implant shrinks, tightens and compresses the breast implant. This medical complication can be painful and cause discomfort to the patient, and can distort the aesthetics of the breast implant and breast.

Main Key Points

- Capsular Contracture is the most common reason for reoperation after breast augmentation.
- The main cause of capsular contracture is unknown.
- Degree of an incident of capsular contracture is graded using the four-grade Baker Scale:
 - Grade I:** The breast is normally soft and appears natural in size and shape.
 - Grade II:** The breast is a little firm, but appears normal.
 - Grade III:** The breast is firm and appears asymmetric.
 - Grade IV:** The breast is hard, painful to the touch, and appears asymmetric.
- Only Baker grade III and IV require surgical treatment.
- Recent trends regarding the surgical approach show:
 - **capsulectomy** (removal of implant and surrounding capsule)
 - **site change** (implant location)
 - **and implant exchange** (removal and placement of a new one) to be the gold standard treatment of clinically significant contractures^{1,2,3,4}

Publication Objective

The objective of this clinical review is to provide an overview of the use of breast implants after capsular contracture (CC) surgical treatment, with a focus on type of surface used. Impleo™ Smooth by GC Aesthetics® was successfully fitted in conjunction with submuscular placement as a surgical treatment option for recurrent capsular contracture in an attempt to decrease recurrence rate.

Main Key Goals

1. To analyse current literature on the surgical treatment of capsular contracture in breast reconstruction, focusing on the type of implant re-implanted after capsular contracture.
2. Report on personal experiences using IMPLEO™ Smooth as a treatment option in patients with Capsular Contracture Baker Grade III or IV.
3. To create a descriptive cohort for baseline statistics on recurrent capsular contracture to be prospectively followed.

What do we know about recurrent capsular contracture surgical treatment?

There is little published data analysing safety and performance of differing interventions to reduce recurrent capsular contracture. No previous review has taken into consideration the impact of the external surface of the prosthesis on recurrence rates of capsular contracture after prosthetic revision.

Our review included:

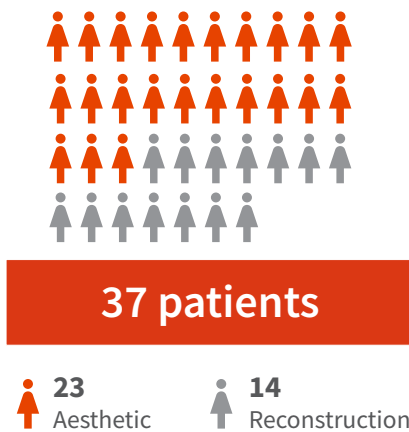
- Replacement with silicone smooth implants
- Replacement with silicone textured implants
- Replacement with saline textured implants
- Replacements with PU implants

Study Design & Results

Personal experience: surgical treatment for recurrent Capsular Contracture using IMPLEO™ Smooth implants

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- 37 patients from two centres had operative revision surgery due to Baker grade III or IV capsular contracture between January 2017 and August 2019.
- All patients had submuscular placement in a different plane from the previous implants.
- All patients received IMPLEO™ Smooth breast Implants.
- Post-operative complications included hematoma (n=3), implant dislocation (n=3), seroma (n=2), wound dehiscence (n=1).
- No patient presented with capsular contracture (grade 3 or 4) 26 months and 29 months post operation.



All patients received
IMPLEO™ Smooth



Complications included:

- Haematoma (n=3),
- Implant dislocation (n=3)
- Seroma (n=2)
- Wound dehiscence (n=1)

No other complications were found

0 patients

Presented capsular contracture
(grade III or IV)



POST-OPERATION

Study conducted in two centres

Conclusion

Authors suggest SMOOTH implants should be used when the revision technique involves a site change with subpectoral (under the muscle) placement of prostheses.

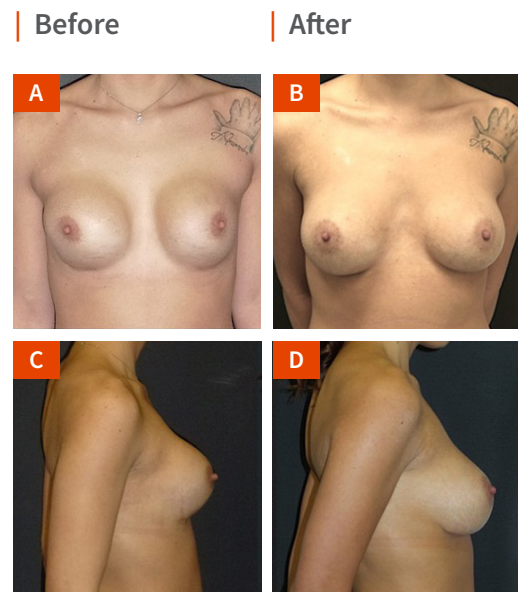
Other recommendations:

Total capsulectomy, implant placed in the submuscular plane, new implants, bloodless dissection, antibiotic irrigation, glove change, covering the incision site with an adhesive barrier, form-stable implants, a sleeve or funnel, nipple shields, and acellular dermal matrix.

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Fig. 1

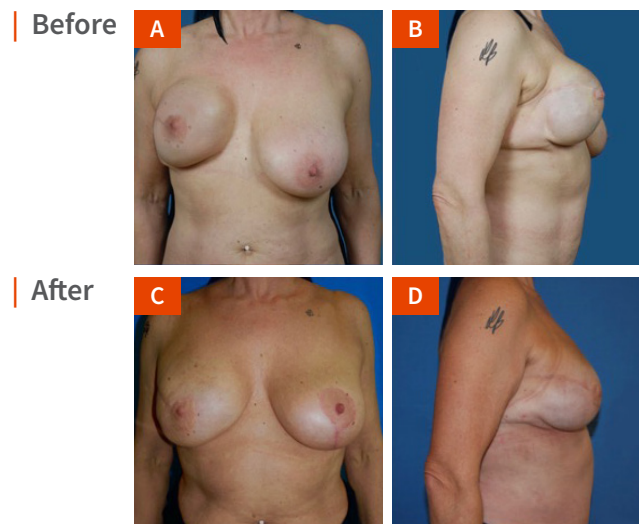
Preoperative view (A), (C) and 30 months after the secondary breast reconstruction (B), (D) with the use of a new subpectoral smooth implant after total capsulectomy in a 38-year-old woman with significant bilateral capsular contracture after bilateral breast augmentation.



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Fig. 2

Preoperative view (A), (B) of a 51-year old woman with capsular contracture and displacement of a textured submuscular implant. In the figures below (C), (D): postoperative view 24 months after the secondary breast reconstruction using total capsulectomy with a new submuscular smooth implant and simultaneous mastopexy.





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