



Invited Discussion on: Smooth Surface Breast Prostheses: Our Experience and the Current Practice in the Use of Smooth Submuscularly Placed Silicone Gel Breast Implants



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The authors have brought to discussion an interesting subject, as BIA-ALCL is a growing problem and has been related to textured implants in most series. They have made a literature review aiming at studies that compared smooth and textured implants placed in a submuscular position. In fact, very few studies of the literature review presented a relevant level of evidence. They have also made an evaluation of their own patients using smooth implants in the submuscular position.

The main reason why plastic surgeons migrated from using smooth implants to textured implants was capsular contracture. The authors state that "... it is unclear whether texturing reduces the incidence or merely delays the onset of capsular contracture". If textured implants, including polyurethane-coated prosthesis, delay the incidence of capsular contraction, it is a good reason to use this type of prosthesis, as an implant will be eventually replaced in most cases. Therefore, the longer a patient will have a prosthesis without capsular contracture, the later the plastic surgeon will have to change the prosthesis.

Ideally, both a systematic review and a meta-analysis should have been done to obtain an answer to the question raised by the authors; however, the effect of such armamentarium is limited in plastic surgery. There are not enough studies with a high level of evidence in most areas

of plastic surgery, therefore a conclusion supported by evidence-based medicine cannot be obtained.

In the Methods session, I would expect to see a more detailed description of the surgical technique used to place the implants and the pocket limits. This can be a risk factor for complications, and capsular contracture is not the only possible complication of a smooth implant.

As the authors mentioned, the primary endpoint investigated was the rate of capsular contracture; however, the follow-up period of the clinical evaluation was very short (follow-up range of 12–30 months) to evaluate this complication. A long-term follow-up of these patients is something worth to be done by the authors, as these patients should bring to light some of the doubts raised by the literature and by the authors themselves in this article.

The very logical question of this study is whether texturing plays a role in reducing capsular contracture when implants are placed in the submuscular position as the incidence of this complication tends to be lower when the prosthesis is placed in this layer.

A systematic review must include only studies that meet a list of criteria so that they could be potentially compared. It is a very hard task to obtain such studies in our specialty, as few of them are considered as level I of evidence [1]. Also, studies to be eligible to be part of a systematic review are those that could compare groups of patients, being one of the groups, a portrait of what is being studied, in this case smooth implants in the submuscular position. The next step, after selecting these studies, is to submit them to a meta-analysis. To do so, the researcher must have selected a representative number of studies with a minimal number of subjects that could be of statistical value. After this statistical analysis, it would be possible to answer the question of the study, in the present case, whether it is better to place a smooth prosthesis in the submuscular layer

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as compared to other types of implants. This is not a reality right now.

One other factor that should be considered in such studies is the fact that many of the old studies have been done with old model prosthesis that do not exist anymore, as technology has changed consistently in that last decades [2]. Studies from the 1990s are done with prostheses with different thicknesses of the silicone membrane, different silicone gel cohesion, different surfaces, etc. These are limitations in the results of a meta-analysis.

It is paramount to point out that the capsule may generate another complication, which is capsule weakness. In this condition, the capsule is very lax allowing the prosthesis to flip within the pocket and it also allows the prosthesis to migrate by gravity beyond the submammary fold, thus creating a double bubble effect. These complications may become more likely to occur if the prosthesis is under the muscle. In this position, repeated muscle contraction may facilitate these secondary complications mentioned above [3].

One good aspect of submuscular breast implant positioning is that there is no atrophy of the breast parenchyma; however, there is a certain muscle atrophy [4] and a significant strength decrease in adduction after 1 year [5]. This last finding might be a volumetric effect of the prosthesis that limits adduction strength. Preservation of the breast parenchyma is helpful in decreasing the clinical perception of a capsular contraction.

Although the authors have reviewed a large amount of papers, it is still early to be sure whether a smooth surface prosthesis will have similar capsular contraction as a textured one. A long-term follow-up of the clinical cases evaluated in this study may bring us valuable information.

Many questions still remain, regarding the most suitable prosthesis shape, the best prosthesis surface, the best gel filling and, finally, the best implant position. I believe that the authors are to be congratulated for the effort in

bringing us valuable information regarding this growing concern about textured implants. New studies about smooth surface prosthesis are very welcome in a time of new challenges in breast augmentation surgery.

Compliance with Ethical Standards

Conflict of interest The author declares that he has no conflicts of interest to disclose.

Human Participants or Animals This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent For this type of study, informed consent is not required.

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