Peer Review File

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Review Comments

Reviewer A

Comment 1: The manuscript appears well written and satisfactory in content. Small note for the authors: line 81-82 sentence "There are several ways of assessing the risk for potential postoperative 83 complications and reconstruction failure, and selecting the appropriate patients for DTI approach". In my opinion, it would be appropriate to cite selection scores developed in this field, in addition to the BTCC such as the Pre-BRA score (Prepectoral Breast Reconstruction Assessment score - Casella D, Kaciulyte J, Lo Torto F, Mori FLR, Barellini L, Fausto A, Fanelli B, Greco M, Ribuffo D, Marcasciano M. "To Pre or Not to Pre": Introduction of a Prepectoral Breast Reconstruction Assessment Score to Help Surgeons Solving the Decision-Making Dilemma. Retrospective Results of a Multicenter Experience. Plast Reconstr Surg. 2021 Jun 1;147(6):1278-1286. doi: 10.1097/PRS.0000000000008120. PMID: 33973934.)

Reply 1: Agree.

Changes in text: added in line 82, and ref. added

Reviewer B

Comment 2: Please additionally comment on the metaanalysis from Ostapenko et al.

The idea of using the mammogramm for skin thickness is nice, however there are not enough prospective controlled data showing the risk of skin necrosis and implant failure due to skin necrosis using prepectoral reco compared with using expander reconstruction or retropectoral reconstruction. Thus, your idea of uinsg this tool for planing the reconstruction is a nice hypothesis however needs real scientific provement!! Please state this in the paper as well

Reply 2: Agree.

Changes in text: added to conclusions “prepectoral, implantbased, breast reconstruction is a safe modality and has similar outcomes with significantly lower rates of capsular contracture, prosthesis failure, and ref. has been added as 46.

Reviewer C

I'd like to thank the authors for their submission which shows the current status of prepectoral breast reconstruction in Argentina. They concluded and proposed BTCC and rigorous perfusion assessment techniques will aid to minimize postoperative complications and reconstruction failure. Mastectomy flap thickness can have a dramatic effect on blood supply and is highly dependent on the anatomical basis and surgical oncologist’s technique.

I would like to ask few questions. First of all, EUSOMA guidelines and NCCN Clinical Practice Guidelines recommend that oncologically safe flaps can be at least 1 cm thickness. In authors study, they are measuring preoperatively fat tissue BTCC Type 1: <1 cm (poor coverage), Type 2: between 1 and 2 cm (medium coverage), Type 3: >2 (good coverage). However, during operation we are still leaving approximately ~1cm thickness and if we leave 2 or more cm of flap thickness it will be oncologically not safe. There were several studies about the thickness of flap during NSM ir SSM,

and results showed, that the local recurrence is much higher in groups with thicker mastectomy flap.
Comment 1: “The presence of sufficient fatty tissue coverage is considered one of the foremost independent factors influencing the success of immediate breast reconstruction and flap viability” ANY DATA????? Maybe you have your own data with final results?? I don’t think that it very important factor, as we all know the main factor is blood supply from perforators, lateral thoracic artery and subareolar plexus.
Reply 1: Yes, we have our own data published and referenced as ref 28. RancatiAO, AngrigianiCH, HammondDC, NavaMB, GonzalezEG, Dorr JC, Gercovich GF, Rocco N, Rostagno RL. Direct to Implant Reconstruction in Nipple Sparing Mastectomy: Patient Selection by Preoperative Digital Mammogram. *Plast Reconstr Surg Glob Open*. 2017;5(6):e1369.

Comment 2: Secondly, in case of prepectoral IBBR what kind of implant you use? If you use only implants without any mesh or ADM, what about postoperative long-term complication such as implant rotation, migration and etc.? I would love to see these reflections of this otherwise excellent article.
Reply 2: Thanks for this important observation. Biological meshes are not available in Argentina and we do not use meshes in our serie. This has been added to conclusions. “In our results there has been no use meshes, and biological meshes like ADM are not available in Argentina.”

Reviewer D
I have reviewed the manuscript "Current Status of Prepectoral Breast Reconstruction in Argentina". The authors present a cogent argument for preoperative digital mammography to access a patient's skin flaps in order to decide on whether they are suitable candidates for direct to implant reconstruction or if would be better cared for with either subpectoral or two stage reconstruction with a tissue expander. Of course, the problems arise in that group of patients whose skin envelopes fall into the second category the authors describe where the thickness of the skin envelope falls between 1 and 2 cm. I have several small suggestions for the authors as follows:

Comment 1: In patients with skin envelopes 1 c m or less (and also in smokers in 1-2 cm range). Instead of going directly to retropectoral implant coverage, another option is to completely delay the reconstruction until wound healing is complete. The reason for this is that the pectoralis major does not entirely cover and implant. With retropectoral reconstruction a piece of dermal matrix is required at the lower border of the pectoralis to form a complete pocket of the implant. Failure of the skin envelope results in exposure of the dermal matrix and ultimately infection and loss of the implant. One might be better served in these patients to delay reconstruction until all the flaps are completely healed. The authors may want to mention this alternative.
Reply 1: Agree. And added in discussion Another option to go prepectoral in risky patients as smokers, is to completely delay the reconstruction until wound healing is complete.

Comment 2: Almost all of the surgeons in the U.S. employ dermal matrix wrap around either the anterior surface of the implant facing the subcutaneous skin or completely around the entire implant when subcutaneous implants in the prepectoral space are used. I do not know if this is the practice in Argentina, but the authors may want to mention this. It seems to reduce the incidence of capsular contracture and can be sutured in a way to hold a shaped implant in place, so it doesn't rotate.

Reply 2: Agree and added in conclusions. “In our serie there has been no use of meshes , biological meshes like ADM are not available in Argentina but are referred as lowering capsular contracture rate in the long term.

Comment 3: Textured shaped implants are no longer used by surgeons in the U.S. because of the risk of BIACL. I don't know if this is important in Argentina- but since the authors talk about the use of shaped implants, perhaps this should be mentioned.
Reply 3: Agree. In south America most of breast reconstructions are made with shaped microtextured implants and our experience was asked by the editor.

Comment 4: In patients with large skin envelopes where a Wise pattern is used to reduce the skin envelope- most surgeons in the U.S. construct a dermal flap to cover the implant and mesh in the event of skin loss where all the incision lines come together in the inverted T position. I don't know if this is important to the argument the authors are making - but this is just a thought I had that the authors may or may not want to incorporate.
Reply 4: Agree and added “and skin-reducing mastectomy with a security dermal flap (SRM) techniques can be combined with immediate one-step single-stage breast reconstruction for both risk reduction and therapeutic treatment of breast cancer”

Comment 5: One of the really great positive effects of prepectoral breast reconstruction is that the pain of dissecting the pectoralis muscle off of the ribs is eliminated. Therefore, with appropriate blocks by anesthesia, most of these patient's single stage direct to implant mastectomies and reconstructions are performed on an outpatient basis in the U.S. I don't know if this is done in Argentina- but it may useful to point this out to the readers of the journal if this is something that is done in Argentina.
Reply 5: Agree, we make the same. It has been added to text in surgical technique section “Another option to go prepectoral in risky patients as smokers, is to completely delay the reconstruction until wound healing is complete.

Comment 6: There is no mention made of autologous breast reconstruction which could also be done in the prepectoral plane at the same time as the mastectomy
Reply 6: Agree, but another paper “ current status of autologous breast reconstruction in Argentina has been submitted as asked by the issue editor Dr Jørn Bo Thomsen.

Reviewer E

Comment 1: I enjoyed reading this review and I acknowledge that prepectoral reconstruction in a Type 1 patient may result in post-operative rippling. Some will accept this and plan on second stage fat transfer to avoid the issues with subpectoral reconstructions.
My question: is there really any data that thin coverage- if meticulous preservation of the entire subdermal plexus is maintained- results in ischemic complications? Of course, if you leave an obese patient with thin flaps you have likely violated her vasculature, but a thin patient will likely (not always) have thinner flaps and regardless of the thickness that you leave behind- if you preserve the blood flow, why would you have ischemia just because your flaps are thinner? I can reliably leave behind thin mastectomy flaps where I have been meticulous about the dissection (preserving

subdermal plexus) without ischemic complications (rippling is another matter).
Reply: Yes, Thanks for clarifying this concept. It has been published last year. Added to text "With this technique, thermal injury of the skin can be avoided, the best blood supply of the skin flaps can be preserved, and skin perfusion can be protected[47]; and added to the references as 47. Alberto O. Rancati, MD[1] Maurice Y. Nahabedian, MD et al Revascularization of the Nipple-Areola Complex following Nipple-Sparing Mastectomy (*Plast. Reconstr. Surg.* 151: 254, 2023.) "

Comment 2: My last comment is related to the title. I am not certain you can claim to be representing all of Argentina. This is your work and perspective, not the entirety of Argentina (no survey of Argentinian surgeons was performed).
Reply 2: Agree, but the title was asked to be that by the issue editor. Dr Jørn Bo Thomsen.