Peer Review File

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Reviewer A

Dear Author,

your manuscript is about the experience in breast reconstruction using ADM on the anterior aspect of the implant. The analysis was good and the description, too. I think you should include some photos

Response to Reviewer A

Reply: We would like to thank reviewer A for his positive feedback on our study. As suggested, photos of outcomes have now been included in the revised version of the manuscript.

Changes in the text: Photos have been included in the revised manuscript (Figures 1, 2 and 3).

Reviewer B

Response to Reviewer B

Comment 1: No photographs of outcomes and patients that required additional surgeries.

Reply 1: Photographs of outcomes and patients that required additional surgery have now been included in the revised manuscript.

Changes in the text: Figure 1, 2 and 3 now included in the revised manuscript.

Comment 2: No clarification as to which patients receiving lipofilling as a patient requested elective revision or as a necessity of poor outcome.

Reply 2: We would like to thank the reviewer for the helpful comment. Lipofilling was employed to improve aesthetic outcomes as a shared decision with the patients. This is now clarified in the manuscript.

Changes in the text: Page 7, Lines: 109-112.

Comment 3: 33% complication rate is high with 10% re-operative rate.

Reply 3: We agree with the reviewer that ideally the complication and re-operation rate should be as low as possible. The overall complication rate presented in our study includes both the major and minor complications, for example non-clinically significant seromas requiring no intervention, which developed at any point during the follow-up. The observed overall complication rate is comparable to other published data (Chandarana et al, BJS Open 2020, Wagner et al, JPRAS 2019) as is the return to theatre rate (Chandarana et al, BJS 2020). Moreover, all specific complications rates are similar to the available literature.

Changes in the text: Page 12, Lines: 228-230.

Comment 4: Hydrodissection mastectomy technique could be problematic with vascular compromise as result of tissue fluid pressure, and therefore increased risk of skin loss (6%) and loss of 3 implants. If hydrodisection is needed to provide appropriate skin flap thickness (argumentative and very unusual technique and rarely used) breast surgeon needs develop better mastectomy techniques.

Reply 4: We would like to thank the reviewer for the useful comment. Hydrodissection is an established technique used in both cosmetic and reconstructive breast surgery. Our group has experience with the use of the technique and our outcomes have been previously published (Tasoulis et al, PRS GO 2019). The mastectomy skin flap necrosis rate of 6% observed in the present study is similar to published data (Wagner et al, JPRAS 2019, Nealon et al, PRS 2020, Chandarana et al, BJS 2020).

Changes in the text: Page 12, Line: 235 – Page 13, Line: 238.

Comment 5: Is epinephrine used in solution?

Reply 5: Epinephrine is used in the solution used for the hydrodissection technique. Details are available in Tasoulis et al, PRS GO 2019;7(11):e2495-e. This is also referenced in the text in the section 2.1 2.1 Surgical technique – implant and ADM reconstruction (reference 15).

Changes in the text: No change in the revised manuscript. Appropriate reference with all procedure details provided. (Page 8, Lines: 125-127).

Comment 6: Mastectomy performed by a single surgeon or multiple surgeons?

Critical information relative to outcome and quality of skin flaps.

Reply 6: We would like to thank the reviewer for the important comment. The mastectomies were performed by more than one surgeons but the senior author (GG) was always present either performing or supervising the surgery. This is included in the manuscript (Page 8, Lines: 124-125).

Changes in the text: No change in the manuscript.

Comment 7: No comment on the addition of Fluorescent imaging and its valuable clinical information on skin vascular flow. Imaging could preclude need for 'hydrodissection".

Reply 7: We agree with the reviewer that fluorescent imaging may provide useful information regarding skin flap perfusion. However, hydrodissection technique is used not to only with an aim to preserve the subdermal vascular plexus but also to try to facilitate the preservation of the oncoplastic plane providing even flaps, reduce skin flap traction, and speed up surgical time.

Changes in the text: Page 13, Lines: 238-243.

Comment 8: Textured implants no longer available, this could invalidate capsular contracture rate of study.

Reply 8: We would like to thank the reviewer for the comment but we have to respectfully disagree. Textured implants are still available in the market apart from those produced by a certain manufacturer.

Changes in the text: No changes required.

Comment 9: No comment on why Bovine product was used over human product, advantage or disadvantage?

Reply 9: Human derived meshes are not available in the UK and therefore this was not option. There are other studies available in the literature assessing the use of human products as meshes for pre-pectoral implant based breast reconstruction. The aim of our study was to present the outcomes of the used technique, which is use of an ADM to provide only anterior implant coverage.

Changes in the text: No change required.

Comment 10: No comparison or differentiation of anterior coverage techniques, ie "ADM drape (P1/Pittman-Kays) vs simple anterior coverage and subsequent need for subsequent lipofilling post operative need relative to technique used.

Reply 10: We would like to thank the reviewer for the useful comment. The technique described by Pittman et al, has indeed provided promising results and is now discussed in the revised manuscript.

Changes in the text: Page 13, Lines 256-259.