Peer Review File

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Reviewer A

Some things on the other hand are very unclear and need to be explained or elaborated.

What is the rationale of taking a flap from the abdomen when for a small breast there are clearly other options?

Reply: In the case of this patient, although her breast size was not substantial, considering the high likelihood of postoperative radiation therapy, complications such as capsular contracture associated with implant insertion were anticipated. Therefore, during the decision-making process, both direct-to-implant insertion and autologous tissue-based reconstruction were considered, and the patient opted for autologous tissue-based reconstruction. Moreover, in East Asian individuals, the average breast size is generally small. Consequently, it is common to perform TRAM flap procedures even in patients without exceptionally large breasts.

Changes in the text: we have modified our text as advised (see Page 5, Line 72-76)

On the clinical picture you see nice dermal bleeding and you mention that in your text. how can you explain thata deep injection of the hypotonic solution will damage the skin more than it would damage the tissues that it has been injected in to ?

Reply: Since we have no knowledge of the technicalities of the priorly injected HPL (**the exact** composition of the drugs used, **the location, or the depth of the injection**), it is difficult to accurately assess the effects of the injection. However, based on the CT angio and intraoperative findings, we haved noticed skin retraction, scarring and deterioration of the Scarpa's fascia, and kinking of some of the perforators. Fortunately in our case, with the use of TRAM with several perforators and continuous monitoring of the flap throughout the operation, we did not encounter any acute complications related to flap perfusion.

Changes in the text: we have modified our text as advised (see Page 7, Line 114-130)

How did you evaluate the fat necrosis postoperatively ? clinically alone or any additional imagery ? Again the breast being so small in size the probability of having fat necrosis is relatively limited (zone 1 and zone 2 were included alone most probably).

Reply: At our institution, a protocol is in place to conduct ultrasound examinations immediately in the outpatient setting for nodules that are palpable and exceed 1 cm in size. Following surgery, evaluations for fat necrosis involve physical examinations at regular intervals, specifically at 2 weeks, 4 weeks, 8 weeks, and 3 months, in the outpatient setting. During the first three months of follow-up, no palpable lesions suggestive of fat necrosis were detected in the patient's breast, and additional investigations such as ultrasound were not performed.

Changes in the text: we have modified our text as advised (see Page 6, Line 97-102)

Reviewer B

The Authors evaluated the effect of Hypotonic Pharmacologic Lipodissolution on abdominal free flap perfusion in one patient. The reposrt is new and interesting to a global audience. It is not clear why Authors state that in skin sparing mastectomy cases (and not in non-skin sparing

procedures) a substantial skin flap preservation is needed. Auithors please clarify.
Reply: Unlike nipple-sparing mastectomy, in the skin-sparing mastectomy performed at our institution, there are instances where more than 10x10 cm of skin is resected, necessitating a sufficient abdominal skin envelope to match the size of the contralateral breast.
Changes in the text: we have modified our text as advised (see Page 8, Line 145-148)

Reviewer C

Overall, interesting case report with sound science.

Line 30: Please descibe NSM as nipple-sparing mastectomy in your first reference to NSM. Though a known acronym in the field, this would be more permitting to an international audience.
Reply: Thank you for the valuable feedback. I will make the revision.
Changes in the text: We have modified our text as advised (see Page 2, Line 30)

Line 38: Impact in which way? Positive or negative?
Reply: in NSM cases requiring minimal skin flap preservation, a history of HPL may have a less negative impact on TRAM flap reconstruction.
Changes in the text: We have modified our text as advised (see Page 2, Line 38)

Lines 93-97: Please reword after removing "unfortunately", "fortunately", and therefore. Very respectfully, at present, these lines do not make sense and seem to aim to link concepts which have not been made clear to the reader.
Reply: Thank you for the comment. I will remove "Unfortunately," "Fortunately," and "Therefore" and rephrase accordingly.
Changes in the text: We have modified our text as advised (see Page 7, Line 110-113)

Line 102: Please add comma after "complications."
Reply: Thank you for the valuable feedback. I will make the revision.
Changes in the text: We have modified our text as advised (see Page 8, Line 135)

Line 110: Please add hyphen between "skin sparing."
Reply: Thank you for the valuable feedback. I will make the revision.
Changes in the text: We have modified our text as advised (see Page 8, Line 143)

Line 122: Please make "deepitheliazation" "de-epithelialization"
Reply: Thank you for the valuable feedback. I will make the revision.
Changes in the text: We have modified our text as advised (see Page 9, Line 159)