Peer Review File

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Reviewer A

This is an interesting topic, and one that has only been briefly touched upon in the literature, as the authors allude to.

However, it is very unclear to me what the purpose of this paper is.
There is no methodology and no clear direction.
Is this a review? If so, it needs a methods and results section.
Is this a personal experience? none is presented

Reply: Thank you for your comments. It is an invited review with specific title and object (Process Efficiency in Autologous Breast Reconstruction). It was an unstructured review according to the instruction received with the invitation letter (For an example of manuscript format, please refer to our previously published article: Review Article: https://gs.amegroups.com/article/view/42724/pdf.)

However, we agree with your comment and we revised the structure of the review according to journal instruction for authors.

Reviewer B

Above all, thank you very much for submitting your clinical study to Gland Surgery.
However, I will give you a few comments about what you think is lacking.

Table 1 is not in the manuscript. Looks like I need to re-upload.

Reply: Thank you

You used the word Autologous breast reconstruction, but it seems that only the method using the abdomen-based flap was summarized. There are various breast reconstruction methods using autologous tissue transfer, and depending on the patient's breast size and preference, the surgical method is chosen after sufficient consultation, but there is no such part. I think you need to edit the title or add a description to the content.

Reply: Thank you for your comment. This is an invited review article with the above title already selected for a special series on "Advances in Microsurgical Breast Reconstruction" for Gland Surgery. The purpose was to discuss efficiency in breast reconstruction using autologous tissue. The purpose of the paper was not to describe all techniques available that will be discussed in other chapter of the series
(Minimizing Morbidity in DIEP Flaps: The APEX Flap (Frank J. DellaCroce) / Maximizing Volume in Autologous Reconstruction: Stacked and Conjoined Flaps

(Nolan S. Karp) / Sensory Recovery in Breast Reconstruction: The Role of Innervated Flaps (Stefania Tuinder) / Alternative Donor Sites in Autologous Breast Reconstruction: The PAP Flap (RobertAllenJr.) / Alternative Donor Sites in Autologous Breast Reconstruction: The LAP Flap (Koenraad Van Landuyt)).

Also, there is no figure or table, so in fact, looking at the manuscript alone, there is no impact and it is not well organized. I think it will be a better article if you add an impactful theorem and explanation or figure about process mapping.

Thank you for the comment. There is a table that probably did not upload in the uploading process. Please find a picture of an example of process mapping. Also we improved the structure of the paper.

Even in the part explained as representative references, can it be seen as a good result only with the operation time? It seems that various factors, progress photos, and types and % of postoperative complications should be explained so that better outcomes can be expected with process mapping. In the current situation, it is not well organized and it is considered to be lacking a lot.

Thank you for the comment. Papers dealing with different types of process mapping approach are reported in the review. All the authors analyzed operative time, and the majority of them considered other aspects including complications, length of stay. Lee at al. also analyzed costs, Operating room and hospital costs, Administration of prophylactic antibiotics and heparin, OR Staff satisfaction surveys. Please see the discussion and Table 1.

Reviewer C

The application of process mapping to surgery is not new to microsurgery, but it ignores the fact that, especially in more complex reconstructions, the shaping and aesthetic fitting of the flap is the key element to the success of the operation.

Thank you for the valuable comment. This is an invited review article on process mapping and efficiency in microsurgery. As you mention, and as it is discussed on the paper process mapping, it is an approach based on improving the flow of the surgery but also post operative outcome. Nine papers have been published on the subject in autologous breast reconstruction so far.

The aim of mapping is to help surgeons to relieve the pressure related to the long and multi-step procedure in order to have more time to improve breasts cosmesis and aesthetic result. We mentioned this thought in the discussion. “Although aimed in limiting operative time and complications, quality improvement strategies in breast reconstruction should not distract surgeons from the final aesthetic shape of the breast. In fact, the ultimate goal of the surgery is to obtain the ideal aesthetic result for

each patient limiting morbidity and time waste. With proper control of the operating environment there is no need to compromise in any of these goals."

These factors are difficult to determine in time and depend on many quality variables. In my opinion, it would make more sense to look for minimum quality criteria (mastectomy (thickness of flap, left gland), flap perfusion, pedicle length, fascia incision, donor site vessels, flap shaping etc.) than to define "assembly line procedures", which take place in microsurgery anyway but ultimately fail due to the quality of the surgeons.

Thank you for expressing your point of view. Process mapping is a method to identify possible pitfalls and improve results. We agree that a well train surgeon is the fundamental basis. As shown by several papers included the nine papers specifically focused on process mapping in breast reconstruction, this approach can improve the result of the surgery according to the outcome analyzed. All the aspect you mention are "condition sine qua non" for the success/failure of a procedure, nonetheless process mapping has shown its benefit to further improve results. This is not a "assembly line procedure" but breaking down a very detailed and elegant procedure so that individual steps can be analyzed and improved.