Peer Review File

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Response to the comments of Reviewer A

Comment 1: The paper needs to be carefully reviewed for multiple grammatical errors.

Reply 1: Thank you so so much for pointing out the language problems in our paper. We have to admit that it is true that we are not good enough at English writing. This work covered so many technical terms and jargon, some of which we have ever never touched before. And clinicians in China rarely work in a language environment filled with English. There is a saying— " a medical student's second major is English" which is often heard from teachers in colleges or hospitals. But these are not our excuses. The main reason is that we usually do not pay attention to the training of language ability. Now, we have made the following improvements：

1. After reading a lot of literature and works, we have updated more technical terms in the new edition of the manuscript.
2. Some doctors and scholars with experience studying abroad gave us a lot of advice.
3. We have accepted the language editing service from the editorial office.

Changes in the text: Given that there are too many grammatical errors involved, we have marked the changes in blue in the revised manuscript.

Comment 2: I am unable to follow the procedure that was done based on the reading of the manuscript and corresponding figures.

Reply 2: Thank you so much for saying that reality. We are so sorry that you could not follow the procedures. Even if we read the description ourselves, we could not imagine and reproduce the operation in our minds. We offer several causes as follows:

1. When we wrote this article at the very first beginning, the number of words and figures required in "Introductions For Author" was far less than what is required now. So, for a detail freak like me, it's really hard and suffering. There was a lot we wanted to say, to share in this paper, but we had to cut out a lot of the technical steps because of the character limit at that time.
2. We did not describe the procedures from the surgeon's point of view.
3. Limited by our poor language abilities, we did not think of a good way to describe some of the technical details.
4. The biggest cause is that we had not reviewed and summarized the procedure properly by ourselves. So, thanks the reviewer A again.

Changes in the text :

1. We add the “flap design” section attached with two figures in the revised manuscript. (see Page 5-6 and Figure 2A&2B, which clearly show the pre-selected region for prefabricating the pre-expanded flap and which thigh is selected for harvesting the anterolateral thigh perforator flap.）

2. We almost rewrote the whole surgical procedure section according to the sequence of operations, making the whole procedure coherent and consistent(especially Stage 1 and Stage 2, see Page 6-9). The part about how the ALT perforator flap was obtained was re-described in detail (see Page 6-7, line 124-140). The figure for harvesting the ALTP flap was added, which clearly shows the layer where the flap was harvested and the origin of the perforator (see Figure 3A). It should be noted that the only perforator we gained was the musculocutaneous perforator, so how to locate and anatomize the perforator is also important since the variation of the perforator of ALT requires different techniques, so we described it in stage 1 (see Page 6-7, line 130-134).

3. The part of harvesting the db-LFCA as the vascular graft was also re-described more natively (see Page 7, line 141-148).

4. The figures are also arranged and grouped according to the overall planning of the surgery, including Preoperative photography, Flap design, Flap Transplantation and Prefabrication, Auricular Framework Reconstruction, and postoperative follow-up (see Figure legends section on Page 18-19).

Comment 3: The authors need to provide a more precise and clear depiction after the ALT free flap reconstruction to the neck.

Reply 3: Thanks for this comment. Obviously, this is related to comment 2. Although we thought this section should be the highlight that resonates and attracts the most attention. Unfortunately, we did not do a good job of showing it in the first manuscript.

Now a series of rough hand-drawn design sketches created by us are provided to reviewers to better explain the technique. (Sketches are only presented in this reply, It has not yet been decided whether they will eventually appear in the accepted manuscript. It should be discussed with the editors.)

Figure 1. Harvesting a free ALTP flap.

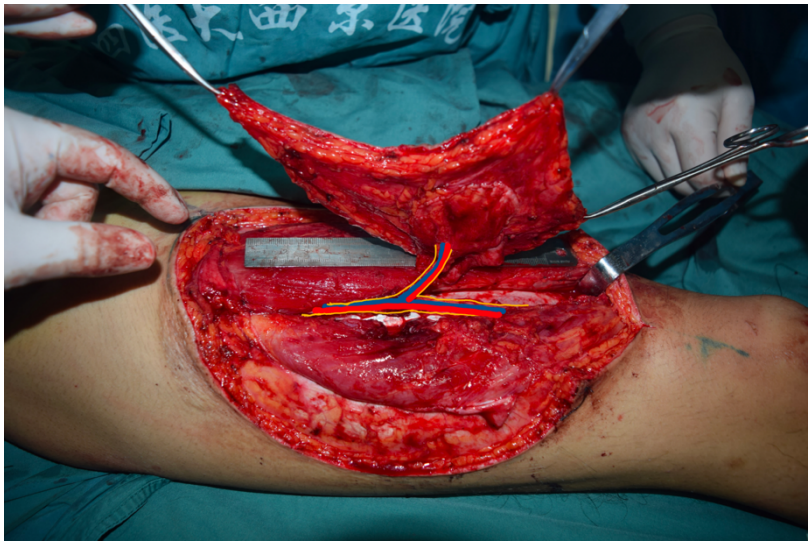


Figure 2. Harvesting portion of the descending branch of the lateral femoral circumflex vascular bundle as the vascular carrier for flap prefabrication.

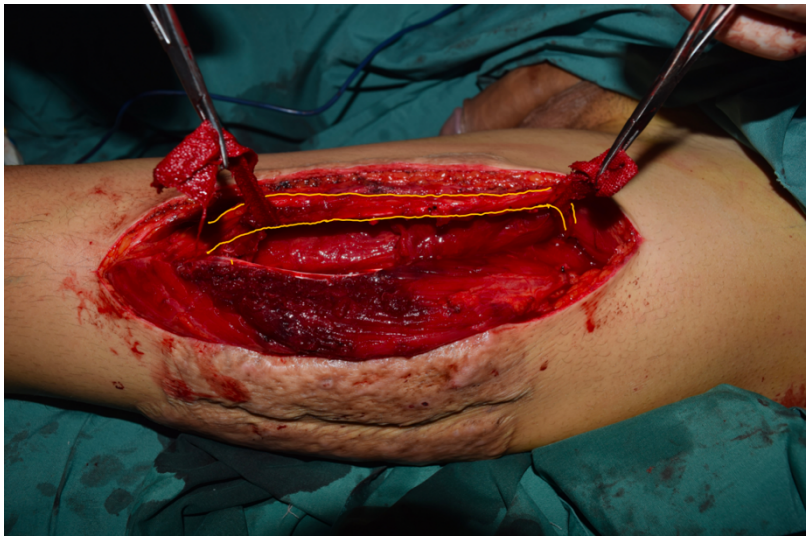


Figure 3. The free ALTP flap and the vascular graft from db-LFCA.

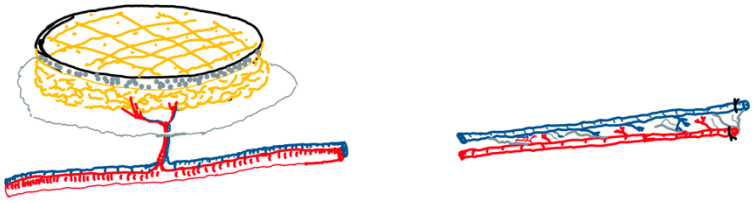
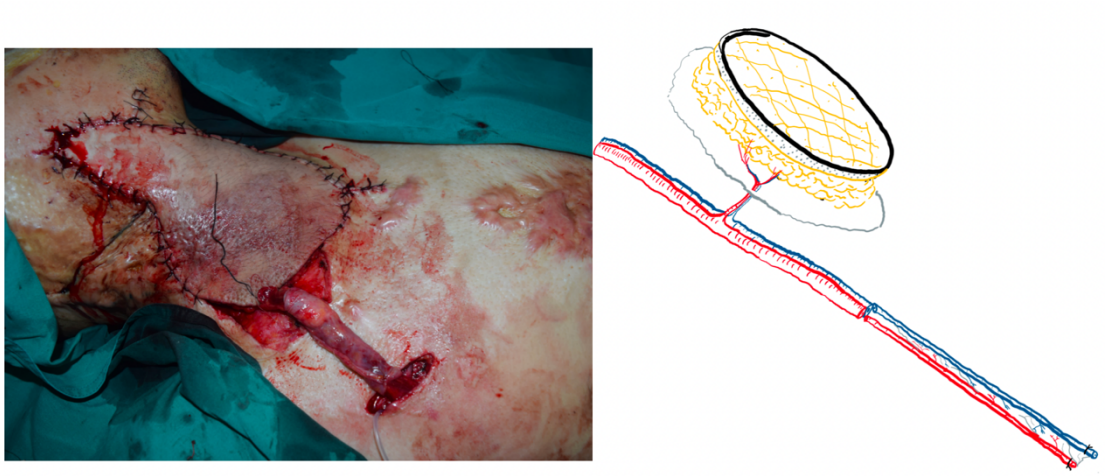


Figure 4. How we performed the anastomosis and lengthened the vascular pedicle of the ALTP flap.



This was an interdisciplinary collaborative surgery, which meant we could not cover everything and had to meet the word count requirement of a case report. However, if the reviewer is very interested in the surgical procedures, you can contact our corresponding author or me through email. Our team is very willing to have in-depth communication with the reviewers. If there is further cooperation, such as remote surgical live communication and online surgical discussion, we are very willing and open to it.

Changes in the text :

1. We re-described in the text how to build a vascular bridge between the ALTP flap and the prefabricated area after obtaining the vascular pedicle (see Page 7-8, line 149-161), but it still appeared arid and jerky.

Comment 4: A figure representing "Stage Two" of the reconstruction is required to better understand the surgical technique. There is a missing gap between Figure 2C and Figure 2D.

Reply 4: We are very sorry that a figure representing "Stage Two" was not offered in the first manuscript. It was a real oversight in our work. The reason is that we did not find a clear picture that met the figure requirements at that time. It was a long time span as well. Now we provide 2 figures here to see whether or not they are qualified for publication.

Changes in the text :

1. We added 2 Figures to the revised manuscript (see Figure 3E&3F).
2. We rewrote Stage 2 section, which contained our intraoperative diagnosis, thoughts, and choices (see Page 8-9, line 162-178).

Comment 5: The authors mention "anterolateral thigh pedicle flap" -- ALT is a free flap and not a pedicle flap.

Reply 5: Thank you for pointing out this common-sense mistake. This is the mistake

we should not make as flap surgeons. The original thought about this wrong term was to emphasize a result that we had dissected a relatively long and complete T-shaped pedicle, so we call ALT the pedicled flap. This could be very misleading to a doctor who is not familiar with our field. Through reading the classics in flap surgery and many literature, I have a better understanding of flaps. At the same time, we were also aware that we needed to accumulate more technical terms.

When flaps were attached with a pedicle linked to the main trunk of the original vessel and were transposed to the wound, they were the pedicle flap. This T-shaped pedicle inevitably reminds people of flow-through design. But this is not a flow-through flap in our case.

There are many different names for the free perforator-based anterolateral thigh flap on PubMed, such as ALTP flap, ALT perforator flap, perforator-based ALT flap, and so on. We finally chose "the anterolateral thigh perforator (ALTP) flap" in our paper because it was widely used in writing an essay.
In addition, "twice-expanded" is not a technical term instead of "re-expanded", we have made the changes in the revised version.
Changes in the text :
1. We replaced all the wrong names with "the anterolateral thigh perforator (ALTP) flap" (see in the revised manuscript, they were also marked blue).
2. We replaced all the "twice-expanded" with "re-expanded" (see in the revised manuscript, they were also marked blue).

Comment 6: What was the functional outcome of the reconstruction? The author mentioned that the patient could not raise his head preoperatively. Did head mobility improve after surgery?
Reply 6: The answer is Yes！ The patient achieved a marked improvement in neck mobility. Since this is not the main discussion of the article, we did not specifically mention this in the postoperative follow-up. Now that the patient has returned to his hometown to start a new life. He is also very busy at work these days. So we asked him to take several photos with the help of his friends or families according to our introductions, as the following show:

Figure 5. From different perspectives, significant recovery of neck function was achieved. This image is published with the patient's consent.

As we can see, his neck mobility has improved considerably. However, we did not submit these pictures due to the limited number of figures.

Changes in the text: We specifically added the description about the improved neck mobility (see Page 9, line 196).

Response to the comments of Reviewer B

Comments: The work presents an interesting method of the auricle reconstruction. Treatments of the above-mentioned reconstructions in patients after extensive skin burns are a particular problem. Like any multi-step method, this one seems to carry the risk of failure at each step.

Reply: Thank you so much for your appreciation, which we considered as an encouragement. You are right. We know it has not been easy throughout the journey. There is a risk of failure at each step, and we deeply knew about that. First of all, the patient was very eager to reconstruct his right ear defect. Secondly, out of professional ethics and full confidence in microsurgical techniques, we believed that we could solve this problem for the patient.

In the latest revision of the manuscript, we rewrote the discussion section, which included our thoughts and decisions at each stage of surgery and how to do better in some detail to avoid related flap complications.

On the way of continuous exploration, we also hope to learn from you and communicate with you (Via teleconference or Sharing meetings on Surgical experiences or other methods). We are always devout and open. In the future, we hope to improve the surgical program, expansion technique and wound healing.

We hope that with the help of your suggestions, the dream of complete prefabrication and reconstruction of the small organs on the body surface can be realized as soon as possible. Thank you so much!

Changes in the text: We have modified the Discussion section (see Page 10-13, line 199-282). In this section, we particularly discuss our views on and management of the anatomical variations(see line 211-231). The rationale for the re-expansion and the key benefits that we expect to gain from re-expansion were also discussed (see Page 12, line 243-258).

Additionally, we would like to state the originality of all the figures presented in this file declare on behalf of all co-authors. All the figures have not been published previously. All the authors and the patient have approved the publication of all the figures.

Finally, thanks again to the reviewers for your valuable advice. This is not a compliment. Please contact us if you have any questions. All your suggestions are important and encourage us to improve our techniques in the future. Once again, many thanks and respects to ATM and the editors for continuously supporting and embracing cutting-edge technologies and ideas, as always!

Yours Sincerely, Yang Chen

Figure 6. The patient was signing an informed consent form this spring. This image is published with the patient's consent.