

“Evaluation and Optimization of Autologous Asymmetric Bilateral Breast Reconstruction Techniques”

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Introduction

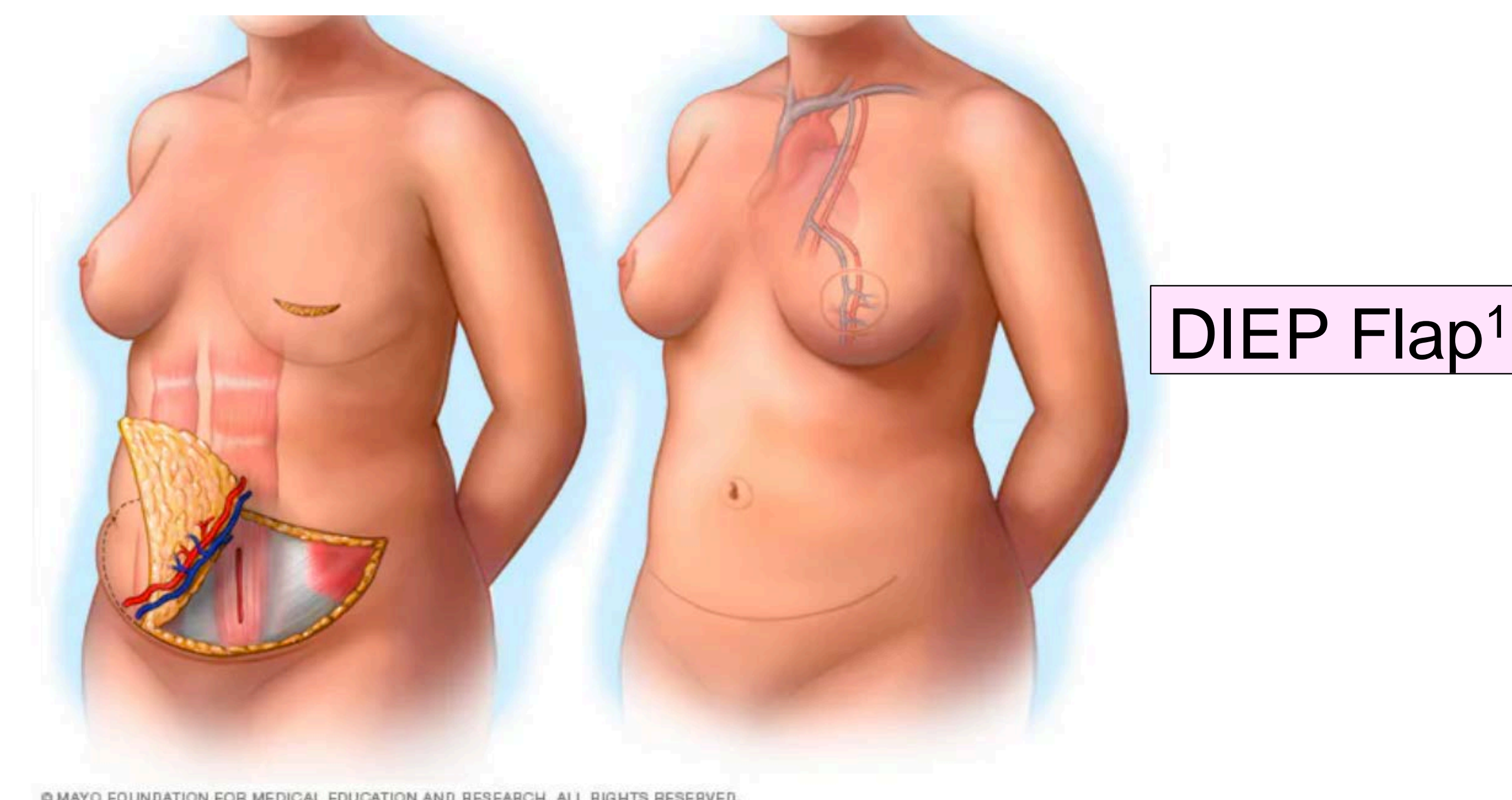
- Breast reconstruction is an important aspect of breast cancer treatment and recovery.
- For prophylactic reasons, many patients diagnosed with unilateral breast cancer choose to undergo a bilateral mastectomy followed by reconstruction.
- The surgeon’s challenge is to create two symmetric breasts when there are different needs for each breast.
- Surgeons often use different types of flaps to reconstruct the breast. In this procedure, skin, fat, and blood supply are transferred to the breast. An example of this is the deep inferior epigastric perforator flap (DIEP).
- The surgeon’s goal is to maximize aesthetic outcomes and minimize complications from surgery.

Methods

- Retrospective study
- Clinical review with patients from the Greater New Orleans Area
- We filtered out bilateral breast reconstruction patients. We then chose patients who underwent asymmetric autologous breast reconstruction.
- After this sorting, we analyzed differences between patients such as mastectomy weight, flap weight, and flap survival rate.

Results

- Of 509 possible patients, 359 had bilateral breast reconstruction.
- Of these 359 patients, sixty-three were asymmetric, autologous patients. In total, there were 136 flaps performed.
- Fifty-two of these patients had one DIEP used on the right breast and one DIEP used on the left breast. Four had two DIEPs and one SIEA (superficial inferior epigastric artery flap).
- The average immediate side mastectomy weight was 554.07 grams, and the average delayed side mastectomy weight was 631 grams. The average weight of the immediate side flaps were 661.65 grams, and the average weights for the delayed flaps were 698.26 grams.
- The flap survival rate was 97.79%.
- We found thirteen patients with fat necrosis and five patients with mastectomy necrosis. Eight patients had to be taken back into the operating room due to complications. Eight patients also developed a hematoma, and eight patients had wound healing problems. One patient also had seroma.



References

1. Mayo Clinic. (1998-2021). [Breast reconstruction with flap surgery] [Drawing of Deep Inferior Epigastric Artery Flap]. Mayo Foundation for Medical Education and Research. <https://www.mayoclinic.org/tests-procedures/breast-reconstruction-flap/about/pac-20384937#dialogId35451476>.

Conclusions

- The delayed sides seemed to require more flap weight than the immediate sides. This finding may be because the delayed side on average took off more weight during mastectomy than the immediate side. In addition, more flap weight may be needed on the delayed side because the breast tissue is probably more fibrotic contracted due to radiation.
- The results also indicated serious complications concerning fat necrosis, hematoma, and wound healing. Further research should be performed to see if these complications are linked to certain techniques, co-morbidities.

Future Directions

- Our project is still in its beginning stages. We are planning to expand on our project with more data.
- We will be adding more information for our subcategories once we have access to more databases.
- In addition, we will be picking four case studies to show common complications and techniques surgeons encounter in these procedures.

Acknowledgements

Thank you to the amazing surgeons and residents who allowed us to shadow them to watch some of these surgeries in real life!

Also, thank you to the patients in the study! I chose to make my presentation “pink theme” to support them.

