TECHNICAL NOTE

Illuminating for precision - transillumination to visualize the vascular pedicle of pectoralis major myo cutaneous flap : a technical note

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Keywords: Pectoralis major Myo cutaneous flap, Head and neck reconstruction, Transillumination, Visualization of vascular pedicle

Introduction

Transillumination is a common and versatile technique in medicine which involves passing light through body tissues to enhance the visibility of underlying structures. We describe its intra-operative utilisation to help identify the location of the vascular pedicle of a pectoralis major myocutaneous (PMMC) flap. This is a quick and simple method to give the operator immediate and accurate feedback on the location and number of perforating vessels and limits the amount of tissue handling surrounding the pedicle helping to prevent the risk of vascular spasm or iatrogenic injury.

Transillumination technique

Following successful harvesting of the PMMC flap in a conventional manner the flap is raised superiorly away from the anterior chest wall. The theatre lights are adjusted to shine a light directly through the muscular pedicle. (Figure 1) This gives the operative surgeon immediate feedback on the location and number of perforating vessels supplying the flap.

This negates the need for unnecessary palpation of the pedicle to confirm a pulse, and if further dissection is warranted it can be undertaken confidently away from the perforating vessels. This technique can be adopted quickly and with ease at no further cost to the local surgical team as it only utilises what is already widely available in theatres; however, care must be taken by the assistant to not shear the skin paddle whilst manipulating the flap into position.

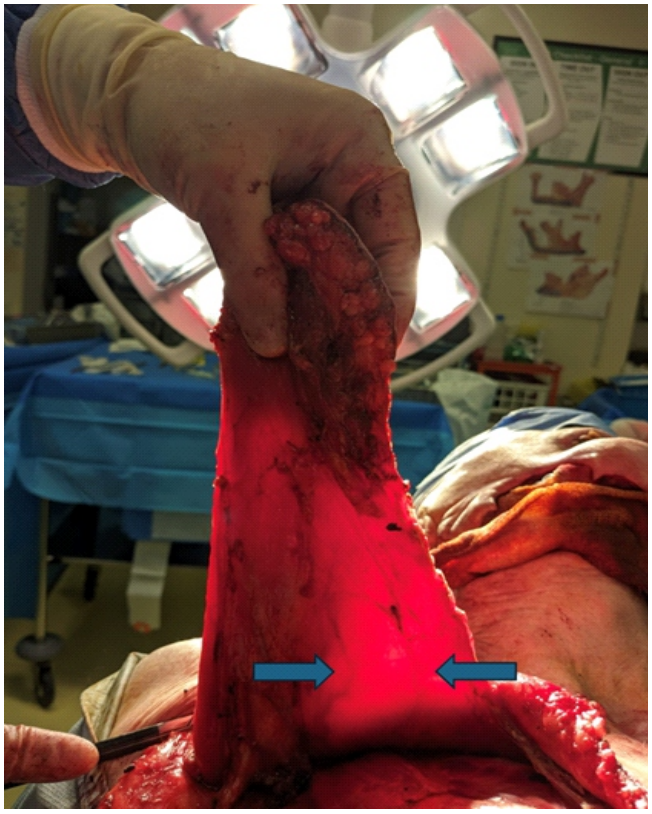

Figure 1: This picture highlights how the PMMC is elevated in a superior position relative to the chest wall. The standard operating room light has been positioned in a caudal position to shine the light directly through the muscular pedicle. This method of transillumination allows the surgeon to see two separate vascular perforators entering the flap (Arrow 1 + 2)

Ethics approval

Not applicable

Informed consent

Not applicable

Competing interests

None

Funding

Not applicable

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Received: 18-07-2024 Accepted:18-09-2025
DOI: https://doi.org/10.4038/sljs.v43i3.9162