

Reverse Myo Fascial Pectoralis Major Flap in Chest Reconstruction: A Case Report

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Abstract: *The pectoralis major myocutaneous flap and myofascial flap variation are utilized in a large variety of head, neck and chest reconstructive procedures that can include coverage of mucosal and/or cutaneous defects. The myofascial flap variation carries no skin paddle and is utilized primarily to close small mucosal defects, to protect major vascular structures and to support primary wound closures in a patient at increased risk of breakdown (prior radiation, diabetic, weight loss). This is a Type V Axial Flap in blood supply [Mathes and Nahai]. This flap has a dominant pedicle and many segmental blood vessels. When we elevate the normal flap, we sacrifice segmental blood vessels and save the dominant pedicle. In the reverse flap is sacrificed the dominant pedicle and all the flap is based in segmental blood vessels. The dominant pedicle is the pectoral branch of thoracoacromial artery. We have also segmental sternal and lateral blood vessels.^{1,3}*

Keywords: kola, isaraj, pectoralis

1. Anatomy

Pectoralis major muscle originates from the anterior aspect of the medial half of the clavicle; from the anterior surface of the sternum; from the cartilages of all the true ribs and from the aponeurosis of the abdominal external oblique muscle. The muscle fibers converge toward its insertion on the humerus. Muscle fibres arising from the clavicle pass transversely, and are often separated from the rest of the muscle by a slight gap. The remainder of the muscle courses superolaterally. Deep to the pectoralis major muscle is its vascular pedicle, the pectoralis minor muscle, the costal cartilages, and inferiorly the costal attachments of the external oblique muscle. The pectoralis major flap is an axial flap and is based primarily on the pectoral branch of the thoracoacromial artery and its accompanying veins. The thoracoacromial artery is a branch of the axillary artery, itself a continuation of the subclavian artery. Additional blood supply arises medially from the internal mammary artery, and laterally from the long thoracic artery, branches of which are generally sacrificed during elevation of the flap to secure adequate pedicle length. The pectoralis major is innervated by the lateral pectoral nerve which can be located just inferior to the clavicle with the pectoral branch of the thoracoacromial artery the flap.^{2,4,5}

2. Surgery

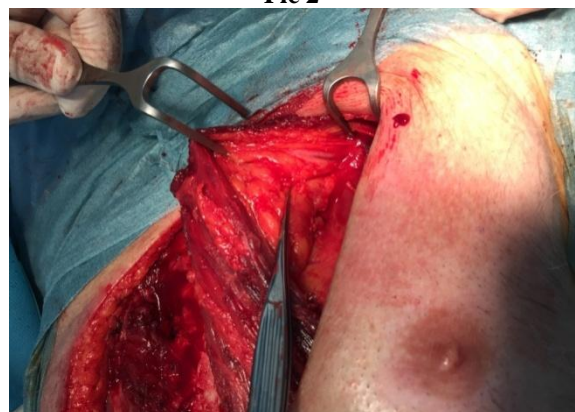
Surgery was performed under general anesthesia. The patient was placed in supine position. The tumor was excised 3 cm around.^{pic1} The sternal bone has been exposed.^{pic2} Then the dissection continued under the subcutaneous fat in order to expose the left pectoralis muscle and the fascia.^{pic3} The muscle was elevated and the main pedicle was sacrificed.^{pic4} Sternal junction of the muscle has been saved.^{pic5} The muscle and the fascia were placed over the defect.^{pic6} The wound was closed with split thickness skin graft.^{pic7}



Pic 1



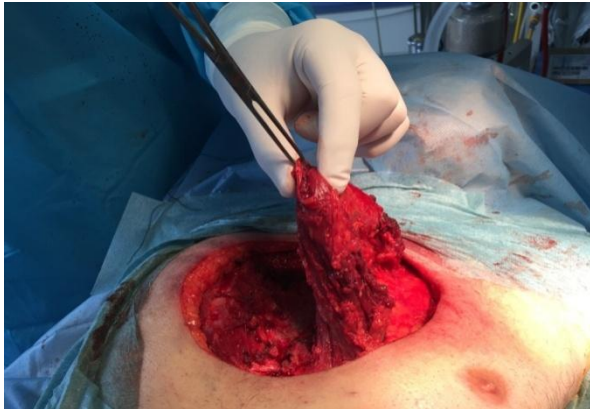
Pic 2



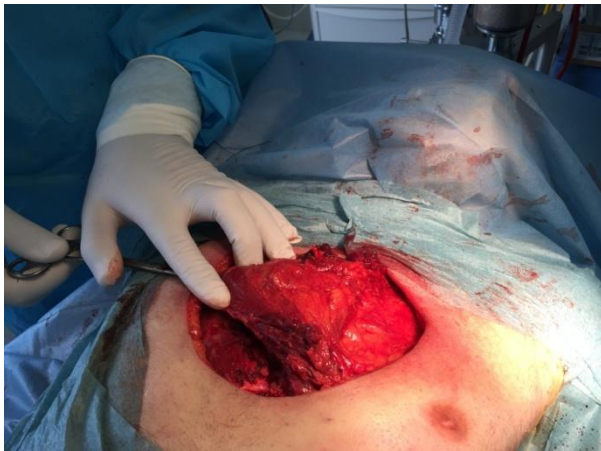
Pic 3



Pic 4



Pic 5



Pic 6



Pic 7

3. Conclusion

The result was excellent and the patient left the hospital five days later. He will be treated now on by the oncologist. As a conclusion, we can say that in some specific cases in patients at increased risk of breakdown, especially prior to radiotherapy we can use successfully the reverse type of myo-fascial pectoralis major muscle flap in primary wound closures.

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