ORIGINAL RESEARCH PAPER

Surgery

KEY WORDS:

SALVAGE TONGUE FLAP IN A CURIOUS CASE OF PECTORAL GAP PHENOMENON

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INTRODUCTION:

Pectoralis Major myocutaneous (PMMC) flap is the workhorse for reconstruction in composite resection of oral cavity cases where free flaps are not feasible or not indicated. Due to the ease of harvesting it and shorter learning curve, it is done in most of the cases. But when there are any intraoperative complications like shearing of the flap or if there are any anamolies in the muscle, the surgeons have options for reconstruction like deltopectoral flap, forehead flap, nasolabial flap, latissimus dorsi flap and so on with their own advantages and disadvantages. Tongue flap is an option to be considered albeit occurrence of some restriction in the tongue movement and articulation difficulty in post operative life. Here we discuss a case of absent medial part of pectoralis major muscle for which we did a salvage tongue flap.

Case Report:

A 56years old postmenopausal lady, a known tobacco chewer presented with a nonhealing ulcer in the right buccal mucosa for the past 1month. On examination, there was an ulceroproliferative growth in the right buccal mucosa involving lower gingivobuccal (GB) sulcus extending anteriorly upto the midline and posteriorly till the right lower 2nd molar. Lesion was abutting the mandible with no erosion and no skin involvement. There was a mobile 2x2cms lymphnode in level IB.

CECT of the face and neck showed a 23 x 9 x11mm lesion involving the right lower GB sulcus not reaching upto RMT with erosion of occlusal cortex of right side of body of mandible. Few enlarged level Ib and II cervical lymphnodes present, largest upto 14mm in size.

Biopsy revealed SCC.

She was planned for right composite resection with right comprehensive neck dissection and reconstruction with Pectoralis Major Myocutaneous flap (PMMC). After resection of the primary tumor and neck dissection, PMMC site was marked. While trying to harvest it, we found that the muscle is thinned out in the infero medial part and completely absent in the supero medial part with absence of the medial vascular pedicle. So PMMC flap could not be taken and the defect was reconstructed with salvage tongue flap.

DISCUSSION:

PMMC flaps are still widely used in reconstruction of defects in oral cavity malignancies in developing countries like India due to various reasons like ease of harvesting, shorter learning curve and in low resource settings where lack of expertise of microvascular flap. Before proceeding to any surgery anatomical variations of the organ should be kept in mind.

There are multiple case reports in the literature described various anomalies of the pectoral major muscles. One of the rare anamoly is the Pectoral Gap phenomenon in which the medial portion of the pectoralis major muscle is absent resulting in a gap near the sternum, as in our case. There can be complete absence of muscle in the medial part or isolated absence of muscle in the superomedial part or the inferomedial part only. This phenomenon is described in heavy weight lifters and body builders and is not related to any syndromes like Poland syndrome or Parsonage Turner syndrome. It is postulated to be arising due to repeated trauma leading to lateral pectoral nerve damage which results in atrophy of the muscle in the medial part. Those suffering from this phenomenon usually have no symptoms and the deformity is usually not obvious to the naked eye. If symptomatic, the patient requires physiotherapy for pain relief and avoidance of strenuous activity. Curiously our patient who hails from a tribal area had this phenomenon and preoperatively we could not make out any deformity on examination. The only strenuous activity that could have lead to this is the history of carrying drinking water repeatedly which was elicited retrospectively. This could also be because of Sarcopenia but it is highly unlikely as the lateral part of the muscle is normal with good vascularity.

Tongue flaps have been used in the reconstruction of defects post resection of oral cavity pathologies and also for clefts since long. These are very versatile and because of the proximity, they were extensively used previously. Restriction of mobility, difficulty in articulation, need for a second procedure to release and inset the flap in certain conditions and most importantly the availability of better reconstructive options via free flaps caused them to fall out of favour. They are still handy to know for every surgeon involved in operating oral cavity malignancies and reconstruction of the resulting defects; especially working in low resource settings where no expertise for microvascular flap exists.

CONCLUSION:

When absence of the medial part of pectoralis major muscle is observed with normal lateral part, the phenomenon of Pectoral Gap should be considered. Tongue flap as reconstructive option post excision of oral cavity malignancies though is not preferred regularly, should be kept in mind. In cases where on table the surgeon encounters some anomaly of pectoral muscle or if there are any iatrogenic complications which renders it not suitable for reconstruction, and in the event that microvascular reconstruction is not available, the tongue flap is a simple and handy procedure to perform.

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