

Reconstruction with Medial Sural Artery Perforator Flap: A Case Report

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Abstract

There are numerous perforator flaps reported in the literature for head and neck reconstruction. We are presenting a case report of squamous cell carcinoma of Tongue which was operated by hemi glossectomy, modified radical neck dissection and reconstruction was done with medial sural artery perforator flap (MSAP). Preoperatively handheld Doppler was used to identify the

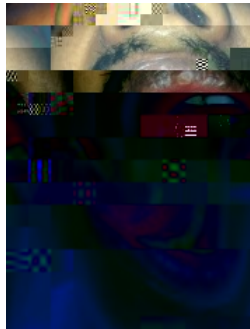


Figure 3 Postoperative flap take up

Discussion

There has been many micro vascular flap used for head and neck reconstruction. Aim of a surgeon is to achieve a good aesthetics, functional preservation with less morbidity to donor site. Kao et al. emphasized benefits of MSAP flap over RAF flap and reported that

increased chances of donor site morbidity due to obliteration of radial artery [8-10]. Yoe et al. in 2014 done a prospective study of MSAP with computed tomographic angiography-aided design in tongue reconstruction and resulted most acceptable free flap for soft tissue defect [11]. Kekatpure et al., used ALT for oral reconstruction and delineated that it is bulkier flap, with hair growth in oral cavity, and dental rehabilitation is difficult with this flap [12].

We had used Handheld Doppler to locate the perforator which is an easy and simplified method for mapping. Doppler sonography can also be used for locating the perforators [11]. Shen et al. used endoscopy for locating perforator of MSAP flap.

In our case report we found two perforators during dissection. Wong et al. reported that sometimes the mapped perforator does not have an artery with them so one should confirm the pulsation of the perforator [13]. The vascular pedicle of MSAP we got was 10cm which make it easy to anastomose with the recipient vessels over neck. The width our flap 5 x 6 cm, so primary closure was easily accomplished. Jason et al. used split thickness graft when donor site is wider than 5 cm [14]. Cavadas et al. reported by removal of the gastrocnemius muscle sometimes there is weakness in the leg and gait is disturbed (Table 1).

COMPARISON	MSAP	RAFF	ALT
FLAP SIZE	SMALL TO MEDIUM	SMALL TO MEDIUM	MEDIUM TO LARGE
VASCULAR PEDICLE LENGTH	8-12 CM	10-15 CM	8-12 CM
THICKNESS OF FLAP	5-8 MM	5-8 MM	MORE BULKY
ANATOMY OF FLAP	SAME	SAME	MORE VARIATION
DONOR SITE MORBIDITY	MILD	SCAR OVER FOREARM	MILD
PRIMARY CLOSURE OF DONOR SITE	6 CM WIDTH	3 CM	8 CM
MEAN TIME OF FLAP HARVEST	30-40 MIN	30-40 MIN	40-50 MIN

Table 1: Vascular flap used for head and neck reconstruction.

Conclusion

We conclude that MSAP is a good replacement for tongue reconstruction as it is reliable, thin pliable, less technique sensitive for oral defect reconstruction.

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