SDM
College of
Dental Sciences
& Hospital

"COMPARISON OF THE OUTCOME OF SUPRAFASCIAL AND SUBFASCIAL DISSECTION OF RADIAL FOREARM FLAP IN HEAD AND NECK RECONSTRUCTION"

by

DR. VIVIDHA SINGHANIA

Dissertation Submitted to the
Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka

In partial fulfillment
of the requirements for the degree of

MASTER OF DENTAL SURGERY (M.D.S)

in

ORAL AND MAXILLOFACIAL SURGERY

Under the guidance of
DR. ANIL DESAI

DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY,
S.D.M COLLEGE OF DENTAL SCIENCES AND HOSPITAL,
DHARWAD
April 2013

ABSTRACT

The radial forearm flap is a remarkably versatile and reliable tool in head and neck reconstruction. However, a spectrum of donor site deficits following harvest of this flap has been reported. Several surgical techniques have been proposed to improve skin graft take, and avoid tendon exposure and subsequent undesirable results at the donor site.

Objective of the study: The study was conducted to compare the donor site morbidity associated with suprafascial radial forearm donor site as compared to that associated with subfascial donor site in oral carcinoma patients undergoing reconstructive surgery in SDM Craniofacial unit Dharwad from 2010 to 2012.

Methodology: *A total of 20 patients were included in the study: 10 undergoing* suprafascial dissection for harvesting the radial forearm flap and 10 undergoing subfascial dissection for the same. The donor site morbidity was assessed in the two groups using both objective and subjective scales at 15 days, 1 month and 4th month post-operatively. The objective evaluation was done for skin graft uptake, tendon exposure, delayed healing, range of motion and grip strength. The subjective evaluation was done using patient related wrist evaluation (PRWE) and patient and observer scar assessment scale (POSAS). The results of the two groups were analysed statistically.

Results: The suprafascial group showed 80% of patients with complete graft uptake with only 20% of the patients showing minor graft loss. In the subfascial group 50% showed *complete graft uptake; 40% showed minor graft loss and 10% showed major graft loss. No* incidence of tendon exposure was seen in both groups; while 20% patients showed delayed healing in subfascial group, there were no cases of delayed healing reported in suprafascial group. ROM and grip strength though found to be higher in suprafascial group at each follow up, statistical significance between the two groups were not found. Subjective evaluation revealed a lower score in POSAS scoring in suprafascial group (p value = .000) showing better patient satisfaction in this group with regards to aesthetic outcome while the PRWE pain and function score did not reveal a statistically significant result between the two groups.

Conclusion: The result of this study of donor site morbidity clearly demonstrates the superiority of the suprafascial dissection technique over the classical one in forearm flap elevation. At the donor site, this technique improves skin graft take and healing and thus, contributes to superior aesthetic results and hence, better patient satisfaction. Donor site functional morbidity does not seem to be an important determining factor between the two techniques of dissection.

Key words: Donor Site Morbidity, Radial Forearm Flap, Skin Graft Uptake, Range Of Motion, Grip Strength, Suprafascial, Subfascial, POSAS, PRWE.