

ORIGINAL ARTICLE

ORAL COMPLICATIONS AFTER LINGUAL MUCOSAL GRAFT HARVEST FOR URETHROPLASTY

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Background: The aim of this study was to assess the complications at donor site after lingual mucosal graft harvesting for urethroplasty.

Methods: From March 2006 to December 2006, 30 patients of anterior urethral stricture underwent lingual mucosal graft urethroplasty. The site of the harvest graft was lateral mucosal lining of the tongue. Donor site complications, that is, pain, slurring of speech, pain during speech, salivatory changes and difficulty in protrusion of tongue were noted.

Results: The mean (range) age of patients was 36.2 years (22–52 years). The mean (range) stricture length was 8.4 cm (4.8–16 cm) and graft length was 8.5 cm (4.2–16.2 cm). Mean duration of follow up was 3.8 months. At the first postoperative day, 90% of the patients experienced pain at donor site and 20% had slurring of speech. Pain was mild to discomforting in 80% and distressing to horrible in 13% of the patients. By third postoperative day, two-thirds were pain free, one-thirds had mild pain only and none had slurring of speech. By day 6 of surgery, all patients were pain free. Six per cent of the patients reported numbness over ventral aspect of anterior half of tongue, which persisted in the first follow up and subsided by second follow up. There was no bleeding, haematoma or infection at donor site. All patients were able to resume oral fluid within 24 h, eat soft solid diet in 48–72 h and return to normal diet after 4–5 days of surgery. No patient complained of difficulty in opening the mouth, salivation disturbances, perioral numbness or difficulty in protrusion of tongue. No long-term functional or aesthetic complications were reported.

Conclusion: Lingual mucosal graft harvesting is feasible, provides a long graft, is easy to carry out and is the least morbid procedure.

Key words: buccal mucosal graft, lingual mucosal graft harvesting, oral complication, substitution urethroplasty, urethroplasty.

Abbreviations: BMG, buccal mucosal graft; LMG, lingual mucosal graft.

INTRODUCTION

Since the 1990s, a large variety of free extra-genital graft tissues has been used for urethroplasty such as ureter, saphenous vein, appendix, full-thickness skin, bladder mucosa and buccal mucosa.¹ The use of buccal mucosal graft (BMG) in urethroplasty was initially reported in 1992 for the management of multiple operated hypospadiac anterior urethral strictures.² Since then it has become an increasingly popular graft tissue for urethral replacement in one or two stage, posterior and anterior urethral stricture repair.³ Current opinion is that, if free extra-genital tissue is needed to carry out urethroplasty, a BMG provides excellent clinical results.⁴ But the donor site in BMG urethroplasty is not without complications. The main long-term complications are perioral numbness, persistent difficulty with mouth opening and change in salivary function.³ The complications of lip mucosal graft harvesting are eversion of lip vermilion and lip contracture.⁵

The mucosal covering the lateral and undersurface of the tongue is identical in structure with that lining of the rest of buccal

cavity.¹ Lingual mucosa has constant availability, easy harvesting, favourable immunological properties (resistance to infection), excellent tissue characteristics (a thick epithelium, high content of elastic fibres, thin lamina propria and rich vascularization) and adaptation to wet environment. These properties make it suitable for graft in urethroplasty. We used lingual mucosal graft (LMG) for management of anterior urethral strictures and evaluated the possible complication at the donor site. To best of our knowledge this is the first study to describe the oral complications of LMG urethroplasty.

PATIENTS AND METHODS

From March 2006 and December 2006, 30 consecutive patients of long anterior urethral strictures were treated with LMG urethroplasty by one surgeon in our department. Patient profile is shown in Table 1. All the patients were thoroughly evaluated with history, physical examination, uroflowmetry, urethroscopy and retrograde and voiding urethrography. The oral cavity of all patients planned for substitution urethroplasty was inspected. Exclusion criteria include stricture length <3 cm, leucoplakia of oral cavity, submucosal fibrosis and any history of previous oral surgery or oral neuropathy. Patients were started on Povidone-iodine (IP 5% w/v) mouth gargles thrice daily, 48 hours before surgery.

The surgical procedure was carried out with the patient under general anaesthesia with nasotracheal intubation. LMG was taken from the lateral mucosal lining of the tongue between the papillae

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