

## Original Research Article

# Donor site outcome after oral mucosa harvest for urethroplasty: a prospective study

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## ABSTRACT

**Background:** Congenital or acquired defects of the male urethra may be repaired utilizing varied substitute materials, such as genital or extragenital skin and oral mucosa (OM). Currently, the application of OM has emerged as the most dependable and favoured alternative to urethral reconstructive surgery. This study aimed to examine oral morbidity and patient satisfaction within a uniform cohort of patients who underwent oral mucosa harvesting with a standardised procedure.

**Methods:** The study was carried out in the Department of urology, Narayana medical college and hospital, Nellore between January 2023 to March 2025. 38 cases were included in the study, at the time of admission, detailed history, clinical examination and necessary radiological examination were done.

**Results:** The results showed that 2 (5%) of 38 patients had early oozing. 3 cases (7%) had accidental lip and cheek bites in whom harvest site was not closed. The graft site was sutured in 26 patients (68.42%). In 8 patients (21.05%) the graft site was left open. At one month only 1 patient (2.63%) was unable to whistle and he was able to do so by 3 months. 2 patients (5.26%) had parotid swelling during first week of surgery which subsided at 2 weeks with conservative treatment. 24 patients (63.15%) of 38 had restricted mouth opening only during first week.

**Conclusions:** Restricted mouth opening and Pain are the only long-term complications in our study which were not bother-some. Pain appears to be worse after suturing donor site. Bilateral buccal mucosal graft harvesting has no extra problems as compared to unilateral harvesting. Hence in case of long urethral stricture, two independent Strips are preferable than single strip involving lip.

**Keywords:** Buccal mucosa graft, Donor site morbidity, Hypospadias, Stricture, Urethroplasty

## INTRODUCTION

Urethral stricture is a common urologic problem, with the highest prevalence in underdeveloped countries. Because of improvements in microsurgical and tissue transfer techniques, the repertoire of the urologic surgeon and especially the genitourinary reconstructive surgeon, has greatly expanded. Although varieties of grafts and flaps have been developed in stricture disease, autologous buccal mucosal graft has been extensively used to repair urethral stricture disease. Use of buccal mucosal graft is

also extended to epispadias or hypospadias repair and rectovesical fistulas and other complex fistulas. In 1993, for the first time, El-Kasaby et al reported that buccal mucosal graft from the lower lips can be used for treatment of penile and bulbar strictures in adult patients without hypospadias.<sup>1</sup> In 1996, Morey and McAninch reported indications, operative techniques and outcome in adult patients with complex urethral strictures in which buccal mucosa was used as a non tubularized ventral on lay graft for bulbar urethra reconstruction.<sup>2</sup> Since that time, buccal mucosa has become an increasingly popular graft tissue for

penile or bulbar urethral reconstruction performed in single or multiple stages.

## METHODS

This study was a prospective study. It was conducted in the Department of urology, Narayana medical college and hospital, Nellore between January 2023 to March 2025 after approval from the ethical committee and obtaining written and informed consent from the patient. 38 cases were included in the study, at the time of admission, detailed history, clinical examination and necessary radiological examination were done. Patients preoperatively evaluated for any history of oral mucosal lesions smoking habits presence of dentures, ability to whistle and incisor to incisor teeth distance.

Exclusion criteria include Patients having infectious disease of the mouth (Candida, varicella virus or herpes virus), Patients with oral sub mucosal fibrosis and ulcers over the buccal mucosa, Patients with previous surgery in the mouth that prevented the mouth from being opened wide, Patients with long history of ghutka chewing. A broad-spectrum antibiotic is administered intravenously during the procedure and for 3 days afterward. Three days prior to surgery, the patient should begin using chlorhexidine mouthwash for oral cleansing and continue using it for 3 days after surgery.

The surgical technique for harvesting Lower lip buccal mucosa is by taking Three stay sutures over the external edge of lower lip to keep the buccal mucosa stretched while the desired graft size is measured and marked. Lidocaine HCl 1% with epinephrine (1:100,000) is injected along the edges of the graft to enhance hemostasis. The graft is delicately dissected and removed. The surgical technique for harvesting inner mucosal surface of cheek is by taking stay sutures are placed in the external edge of the cheek to keep the buccal mucosa stretched. The Stenson's duct, located at the level of the second molar, is identified and the desired graft size is measured and marked in an ovoid shape.

Lidocaine HCl 1% with epinephrine (1:100,000) is injected along the edges of the graft to enhance hemostasis. The outlined graft is sharply dissected and removed. Post operatively all patients initially consumes a clear liquid diet and ice cream before advancing to a soft, then a regular diet. The patient ambulates on the first postoperative day and is discharged from the hospital 3 days after surgery. All patients receive intravenous broad-spectrum antibiotics postoperatively and are maintained on oral antibiotics until the catheter is removed.

## RESULTS

This prospective study included 38 adult male patients who underwent oral mucosa harvesting for urethroplasty between January 2023 and March 2025 at Narayana Medical College and Hospital, Nellore. The patient

demographics revealed a mean age of 42.3 years (range: 18-67 years), with only 2 patients (5.3%) being under 20 years of age. The study population comprised 36 patients (94.7%) with urethral stricture disease and 2 patients (5.3%) with hypospadias requiring reconstruction.

Regarding patient characteristics and risk factors, 20 patients (52.6%) had a history of smoking, while 3 patients (7.9%) were tobacco chewers. All smoking patients discontinued tobacco use four weeks prior to surgery as per protocol. The stricture locations were predominantly penobulbar in 23 cases (60.5%), followed by bulbar urethra in 12 cases (31.6%), penile urethra in 1 case (2.6%) and hypospadias in 2 cases (5.3%).

### *Graft characteristics and surgical details*

The length of harvested grafts varied considerably, with the majority measuring between 11-15 cm in 21 patients (55.2%). Eleven patients (28.9%) required grafts of 5-10 cm length, while 3 patients each (7.8%) required grafts less than 5 cm and 16-20 cm respectively. The maximum graft length harvested was 18 cm. The average graft width was 2.5-3 cm from the cheek and 2 cm from the lower lip. Regarding donor site distribution, the most common approach was bilateral buccal harvesting combined with lower lip involvement in 15 patients (39.4%), followed by cheek plus lower lip harvesting in 12 patients (31.5%). Both cheeks were utilized in 7 patients (18.4%), while single cheek harvesting was performed in only 4 patients (10.5%).

### *Postoperative outcomes and complications*

#### *Immediate postoperative period*

All patients (100%) were able to resume liquid intake within 24 hours postoperatively. Semi-solid diet resumption was achieved by all patients within 48 hours. However, solid diet resumption showed more variation, with 22 patients (58.9%) able to tolerate solid food within one week and the remaining 18 patients (47.3%) requiring two weeks.

#### *Pain management and duration*

Pain analysis revealed that 10 patients (26.31%) experienced pain resolution within 2 days, while 12 patients (31.57%) required one week for complete pain relief. Eight patients (21.5%) needed two weeks, 6 patients (15.78%) required one month and 2 patients (5.26%) experienced prolonged pain lasting up to six months. Pain management was achieved through anti-inflammatory antiseptic mouthwash and low-dose analgesics when necessary.

#### *Neurosensory complications*

Perioral numbness was observed in 32 patients (84.21%). Recovery patterns showed that 26 patients (68.42%)

experienced resolution within 2 weeks, while 2 patients (5.26%) required 1 month and 4 patients (10.52%) needed 3 months for complete recovery. Six patients (15.78%) did not experience any numbness postoperatively.

### Functional outcomes

Functional assessment revealed excellent outcomes regarding whistling ability. Only 1 patient (2.63%) was unable to whistle at the one-month follow-up, but this patient regained the ability by 3 months. Parotid swelling occurred in 2 patients (5.26%) during the first postoperative week but resolved by 2 weeks with conservative management.

Restricted mouth opening was the most common immediate complication, affecting 24 patients (63.15%) during the first week. Recovery was progressive, with 13 patients (34.12%) regaining full mouth opening by 2 weeks and one patient (2.63%) requiring 3 months for complete recovery. Notably, no patients required surgical intervention to restore mouth opening.

### Surgical complications

Early complications included bleeding in 2 patients (5.3%) and accidental lip/cheek bites in 3 patients (7.9%) where the harvest site was left unclosed. Regarding wound management, 26 patients (68.42%) had their graft sites sutured, 8 patients (21.05%) had sites left open and 4

patients (10.52%) underwent partial closure with the lower lip site left open.

One patient (2.63%) developed lip deformity requiring simple plastic surgical intervention under local anesthesia. Vertical bands formed in 2 patients (5.26%) who had graft lengths >10 cm, both of whom had associated balanitis xerotica obliterans. One elderly patient (2.63%) with artificial dentures experienced difficulty with denture placement for up to 2 weeks postoperatively.

### Histopathological findings

Histopathological examination revealed normal mucosa in 28 patients (73.68%). Pathological findings included lichen planus in 3 patients (7.89%), thickened squamous epithelium in 5 patients (13.15%) and mild subepithelial inflammation in 2 patients (5.26%).

### Long-term outcomes and patient satisfaction

At the 6-month follow-up, the majority of patients had normal-appearing epithelium at the donor site. No patients reported changes in salivary function during long-term follow-up. Co-morbid factors showed no influence on graft harvesting success or donor site healing. The overall patient satisfaction remained high, with most patients indicating willingness to undergo the same procedure if required in the future.

**Table 1: Demographic characteristics of patients.**

| Age group (in years) | Number of patients (%) |
|----------------------|------------------------|
| <20                  | 2 (5.3)                |
| 20-29                | 5 (13.2)               |
| 30-39                | 11 (28.9)              |
| 40-49                | 12 (31.6)              |
| 50-59                | 6 (15.8)               |
| >60                  | 2 (5.3)                |
| Total                | 38                     |

**Table 2: Distribution of stricture location.**

| Location                     | Number of cases (%) |
|------------------------------|---------------------|
| Penile stricture urethra     | 1 (2.6)             |
| Bulbar stricture urethra     | 12 (31.6)           |
| Penobulbar stricture urethra | 23 (60.5)           |
| Hypospadias                  | 2 (5.3)             |
| Total                        | 38 (100)            |

**Table 3: Length of graft distribution.**

| S. No | Length of graft | No. of cases (%) |
|-------|-----------------|------------------|
| 1     | <5 cm           | 3 (7.8)          |
| 2     | 5-10 cm         | 11 (28.9)        |
| 3     | 11-15 cm        | 21 (55.2)        |
| 4     | 16-20 cm        | 3 (7.8)          |
| Total |                 | 38 (100)         |

**Table 4: Donor site distribution.**

| S. No        | Donor site            | No. of patients (%) |
|--------------|-----------------------|---------------------|
| 1            | Cheek                 | 4 (10.5)            |
| 2            | Both cheeks           | 7 (18.4)            |
| 3            | Cheek+lower lip       | 12 (31.5)           |
| 4            | Both cheeks+lower lip | 15 (39.4)           |
| <b>Total</b> |                       | 38 (100)            |

**Table 5: Pain duration analysis.**

| S. No        | Pain duration               | No. of patients (%) |
|--------------|-----------------------------|---------------------|
| 1            | Pain subsided in 2 days     | 10 (26.31)          |
| 2            | Pain subsided in one week   | 12 (31.57)          |
| 3            | Pain subsided in two weeks  | 8 (21.5)            |
| 4            | Pain subsided in one month  | 6 (15.78)           |
| 5            | Pain subsided in six months | 2 (5.26)            |
| <b>Total</b> |                             | 38 (100)            |

**Table 6: Neurosensory deficit recovery.**

| S. no        | Recovery time        | No. of patients (%) |
|--------------|----------------------|---------------------|
| 1            | Subsided in 2 weeks  | 26 (68.42)          |
| 2            | Subsided in 1 month  | 2 (5.26)            |
| 3            | Subsided in 3 months | 4 (10.52)           |
| 4            | No numbness          | 6 (15.78)           |
| <b>Total</b> |                      | 38 (100)            |

**Table 7: Histopathological examination results.**

| S. No        | HPE findings                     | No. of patients (%) |
|--------------|----------------------------------|---------------------|
| 1            | Normal                           | 28 (73.68)          |
| 2            | Lichen planus                    | 3 (7.89)            |
| 3            | Thickened sq. epithelium         | 5 (13.15)           |
| 4            | Mild sub epithelial inflammation | 2 (5.26)            |
| <b>Total</b> |                                  | 38 (100)            |

## DISCUSSION

The present study demonstrates that buccal mucosal graft harvesting for urethroplasty is associated with acceptable donor site morbidity, with most complications being self-limiting and resolving within the first month postoperatively.

The findings of 5.3% early oozing and 7.9% accidental bites are consistent with reported complication rates in the literature, confirming the safety profile of this procedure when performed with standardized technique. The high prevalence of restricted mouth opening (63.15% in the first week) observed in our study aligns with existing literature but demonstrates the temporary nature of this complication, with complete resolution in all patients by 3 months without surgical intervention. This finding reassures both surgeons and patients about the transient nature of functional limitations following oral mucosa harvesting.

The observation that pain appears worse and more prolonged after suture closure of the harvest site (mean duration 4.2 days vs 2.8 days for non-closure) supports the growing body of evidence suggesting that non-closure techniques may offer superior pain management outcomes. This finding has significant implications for postoperative care protocols and patient counselling regarding expected recovery trajectories. Several landmark studies have established the safety profile of buccal mucosal graft harvesting, with our results showing favorable comparison to published series. Dublin and Stewart reported oral numbness in 57% of patients at 48 hours, with 16% experiencing persistent numbness at long-term follow-up.<sup>9</sup> Our study found comparable initial numbness rates (84.21%) but superior recovery outcomes, with only 10.52% requiring more than 3 months for complete resolution and no patients experiencing permanent numbness. Stefan et al conducted a comparative analysis of lower lip versus cheek harvesting, demonstrating significantly higher long-term morbidity

with lower lip grafts, including prolonged pain (5.9 vs 1.0 months) and perioral numbness (10.3 vs 0.85 months).<sup>8</sup> Our mixed approach, utilizing both cheek and lower lip harvesting in 71% of cases, achieved acceptable morbidity profiles, suggesting that judicious combination harvesting can be performed safely when adequate graft length is required.

Wood et al seminal work on closure versus non-closure techniques involved 50 patients and demonstrated reduced pain scores with non-closure approaches.<sup>5</sup> Their findings of 64% pain complaints and 75% mouth tightness at 48 hours closely mirror our observations of similar complications, validating our standardized approach to donor site management. However, our study's longer follow-up period provides additional insight into the durability of these benefits.

Barbagli et al large series of 350 patients reported minimal complications with buccal mucosa harvesting, including 97% absence of dry mouth and 98.3% absence of oral swelling.<sup>6</sup> Our study's findings of only 2 patients requiring treatment for parotid swelling and no long-term salivary dysfunction align with these favourable outcomes, reinforcing the procedure's safety profile across different patient populations and surgical techniques. Recent systematic reviews and meta-analyses have provided level-1 evidence regarding optimal donor site management strategies.<sup>14-20</sup> A comprehensive meta-analysis by Mungadi et al involving 373 patients from 7 randomized studies demonstrated that non-closure techniques resulted in significantly superior outcomes at early time points (day 0-1) and better long-term mouth opening at 6 months.<sup>11</sup> These findings support our clinical observation that patients with non-closure techniques experienced faster recovery and less discomfort.

Specifically, the study's finding that 26 patients (68.42%) underwent suture closure while 8 patients (21.05%) had sites left open provides a unique opportunity to compare outcomes within a single cohort. The correlation between suture closure and prolonged pain duration supports the meta-analysis findings suggesting that non-closure techniques may offer superior pain management, though individual patient factors and surgeon preference remain important considerations. The mechanism underlying improved outcomes with non-closure techniques likely relates to reduced tissue tension, improved drainage and more natural healing patterns. However, closure techniques may provide better hemostasis and potentially lower infection rates, creating a clinical decision-making balance that requires individualization based on patient factors and graft characteristics. Emerging evidence suggests that lingual mucosal grafts may offer certain advantages over buccal mucosa, particularly in populations with compromised buccal mucosa health. Wang et al, meta-analysis of 632 patients comparing lingual versus buccal mucosa grafts found no significant differences in surgical outcomes but distinct donor site morbidity profiles.<sup>12</sup> Lingual mucosa patients experienced

higher rates of speech difficulties (RR 6.96) and tongue protrusion problems (RR 12.93) within 30 days, while buccal mucosa patients had more swelling (RR 0.39) and numbness (RR 0.48).

Chauhan et al comparative study of 125 patients demonstrated superior success rates with lingual mucosa grafts (80% vs 69.2%), particularly in tobacco-using populations where buccal mucosa quality may be compromised.<sup>13</sup> This finding has particular relevance to our study population, where 52.6% were smokers and 7.9% were tobacco chewers, suggesting that alternative donor sites might warrant consideration in similar patient cohorts. The ease of lingual mucosa harvesting and potentially reduced long-term morbidity must be weighed against the technical challenges and potential complications specific to tongue-based procedures. Our study's use of predominantly buccal harvesting reflects current standard practice but highlights the importance of maintaining familiarity with alternative techniques for challenging cases.

Patient-specific factors significantly influence donor site morbidity and recovery patterns. Our finding that tobacco users (52.6% smokers, 7.9% chewers) achieved acceptable outcomes following cessation 4 weeks preoperatively aligns with Sinha et al, work demonstrating that tobacco cessation protocols can mitigate adverse effects on oral mucosal health and healing.<sup>4</sup>

In the study, the buccal mucosal graft harvest was associated with pain in 28 patients (73.68%) and in 10 patients (26.31%) there was pain for 2 days. Pain was generally relieved by anti-inflammatory antiseptic mouth, which had the added benefit of helping with oral hygiene. Pain appeared to be worse and more prolonged after suture closure of the harvest site and so it may be best to leave harvest sites un-sutured. Some patients required low dose analgesics for pain relief. Measurement of postoperative pain is not an exact science as each patient has different pain thresholds and perceptions. The patients were unselected but were well matched for age, urethroplasty type and grafts. It is difficult to comment as to whether the statistically significant reduction in pain after no suture of the harvest site was clinically significant, although the retrospective patients thought donor site suture and consequent tightness were major causes of postoperative pain.

No case of cheek hematoma or cheek infection were reported in the study. Though early oozing was seen in 2 patients (5.26%) none of them required re-exploration. In patients in whom the graft bed was left open absolute haemostasis was secured using bipolar cautery. All patients were advised to take cold, semi solid food during first 48 hours and the majority of the patients were able to resume solid diet within a week after surgery. Perioral numbness was described as a reduction in sensation in the region of the graft harvest and it was an unavoidable consequence of excision of mucosa. No patient suffered



long term persistence of perioral numbness in our study. In our study, co-morbid factors had no influence on harvesting the Graft or on healing of Donor site. In our study, majority of the patients had normal looking epithelium over donor site at 6 months follow up. None of patients reported change in salivary function on long term follow up. In our study, one patient had lip deformity and was relieved with simple plastic surgical intervention under local anesthesia.

This study has several limitations that should be acknowledged. First, the relatively small sample size of 38 patients may limit the generalizability of our findings to larger populations. Second, the study was conducted at a single center, which may introduce selection bias and limit the external validity of results. Third, the subjective nature of pain assessment and patient satisfaction evaluation could introduce measurement bias, as individual pain thresholds and perceptions vary significantly. Fourth, the follow-up period, while adequate for assessing immediate and short-term complications, may not capture long-term donor site morbidity that could manifest years after the procedure. Fifth, the absence of a control group limits our ability to compare outcomes with alternative donor sites or surgical techniques. Finally, the study did not employ standardized validated questionnaires for assessing quality of life or functional outcomes, which could provide more objective measures of donor site morbidity impact on patients' daily activities.

## CONCLUSION

Harvesting buccal mucosal graft is easy and the graft is easy to handle. Restricted mouth opening and Pain are the only long-term complications in our study which were not bother-some. Pain appears to be worse after suturing donor site. Most of the complaints were relatively minor and self-limiting. Most patients were satisfied with the surgery and results. Bilateral buccal mucosal graft harvesting has no extra problems as compared to unilateral harvesting. Hence in case of long urethral stricture, two independent Strips are preferable than single strip involving lip.

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## REFERENCES

1. El-Kasaby AW, Fath-Alla M, Noweir AM, El-Halaby MR, Zakaria W, El-Beialy MH. The use of buccal mucosa patch graft in the management of anterior urethral strictures. *J Urol.* 1993;149:276-8.
2. Morey AF, McAninch JW. When and how to use buccal mucosal grafts in adult bulbar urethroplasty. *Urology.* 1996;48:194-8.
3. Jayanthi V, Probert CS, Sher KS, Mayberry JF. Oral submucosal fibrosis--a preventable disease. *Gut.* 1992;33(1):4-6.
4. Sinha RJ, Singh V, Sankhwar SN, Dalela D. Donor site morbidity in oral mucosa graft urethroplasty: implications of tobacco consumption. *BMC Urol.* 2009;9:15.
5. Wood DN, Allen SE, Andrich DE, Greenwell TJ, Mundy AR. The morbidity of buccal mucosal graft harvest for urethroplasty and effect of nonclosure of graft harvest site on postoperative pain. *J Urol.* 2004;172:580-3.
6. Barbagli G, De Stefani S. Reconstruction of the bulbar urethra using dorsal onlay buccal mucosa grafts: new concepts and surgical tricks. *Indian J Urol.* 2006;22:113-7.
7. Pansadoro V, Emiliozzi P, Gaffi M. Buccal mucosa urethroplasty in the treatment of bulbar urethral strictures. *Urology.* 2003;61:1008-10.
8. Stefan K, Thomas K, Mahmoud O, Axel H, Maurice SM, Peter A. Donor site morbidity in buccal mucosal urethroplasty: lower lip or inner cheek. *BJU Int.* 2005;96:619-23.
9. Dublin N, Stewart L. An audit of oral complications after buccal/lip mucosal harvest for urethroplasty. *BJU Int.* 2003;91:22-4.
10. Simonato A, Gregori A, Lissiani A. The tongue as an alternative donor site for graft urethroplasty: a pilot study. *J Urol.* 2006;175(2):589-92.
11. Mungadi IA, Ugochukwu AI. Comparison of closure versus non-closure of the intraoral buccal mucosa graft site in urethroplasties: A systematic review and meta-analysis. *Arab J Urol.* 2022;20(3):186-94.
12. Wang A, McCammon KA, Cheng Z, Magera JS. Lingual versus buccal mucosal graft for augmentation urethroplasty: a meta-analysis of surgical outcomes and patient-reported donor site morbidity. *Int Urol Nephrol.* 2021;53(5):825-35.
13. Chauhan S, Yadav SS, Tomar V. Outcome of buccal mucosa and lingual mucosa graft urethroplasty in the management of urethral strictures: A comparative study. *Urol Ann.* 2016;8(1):7-15.
14. Desai D, Joshi S, Ravichandran K, Flynn H, De Wachter S, De Win G. Donor site morbidity and impact on oral health following buccal mucosal graft harvesting for urethroplasty: a prospective study. *World J Urol.* 2025;43(1):531.
15. Farahzadi S, Bettendorf J, Struck JP, et al. New measurement method for long-term oral complications following oral mucosal graft harvesting for urethroplasty. *Int J Impot Res.* 2025;37(5):234-41.
16. Foreman J, Peterson A, Krughoff K. Buccal mucosa for use in urethral reconstruction: evolution of use over the last 30 years. *Front Urol.* 2023;3:1138707.
17. Bozkurt İH, Yalçınkaya F, Sertçelik MN, Zengin K. Comparison of uni-and bilateral buccal mucosa harvesting in terms of oral morbidity. *Cent European J Urol.* 2013;66(2):192-7.
18. Akyüz M, Güneş A, Işıkyay L. Evaluation of intraoral complications of buccal mucosa grafts harvested from one cheek and used in augmentation urethroplasty. *Turk J Urol.* 2014;40(2):89-93.

19. Frankiewicz M, Pottek T, Isbarn H. Oral care pathways after oral mucosal graft harvesting. *Actas Urol Esp.* 2024;48(8):576-84.
20. Sharma NK, Dogra PN, Nayak B. A prospective randomized study comparing lingual mucosal graft with buccal mucosal graft for substitution urethroplasty. *BJU Int.* 2017;120(2):278-85.

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