

## A Case Study of Management of Bulbar Urethral Stricture with Buccal Mucosal Urethroplasty

Dr. Tejshree Rajendra Chavan\* & Prof. Dr. Rashmi Anil Kale\*\*  
*Department of Shalyatantra, Sumatibhai Shah Ayurved Mahavidhyalaya, Hadapsar, Pune*  
\* (M.S. Scholar)  
\*\* (MD, Ph.D.)

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### ABSTRACT

Plastic and reconstruction surgery in Ayurveda was first mentioned by Acharya Sushruta. Concept of plastic surgery comes under the sandhan vidhi. Plastic surgeries like otoplasty (karnasandhan) and Rhinoplasty (Nasasandhan) are described in sixteenth chapter of Shushruta Sutrasthan<sup>1</sup>, Mutraghat is obstruction due to stricture or any of causes<sup>2</sup>. In Ayurveda it is treated with various uttarbasti and shaman chikitsa and shodana or shastrakarma Chikitsa<sup>3</sup>. It is case of stricture of bulbar urethra is treated with urethroplasty by using buccal mucosa.

**KEY WORDS:** Urethral stricture, Buccal mucosa, Urethroplasty, Mutraghat [Mutrotsang].

### I. INTRODUCTION:

Mutraghat is described in Sushruta are of fifteen types<sup>4</sup> and mutrakrichha are of eight types<sup>5</sup>. Signs and symptoms of urethral stricture can be resembled with Mutrasanga<sup>6</sup> which is one of the type of mutraghat and pittaj mutrakrichha is also related. In mutrasanga during flow of urine sticks to the bladder urinary channel including within the glans penis, straining needed to pass. The passage of urine scanty with or without pain<sup>7</sup>. In pittaj mutrakrichha yellow or reddish hot urine and severe burning sensation is present. The urethral stricture is the narrowing of the lumen of urethra<sup>8</sup>. As maintained in karnasandhan vidhi Aharya and Gandakarna vidhi is resembled to bulbar urethroplasty<sup>9</sup>. Graft technique used, graft means transfer of tissue from one area to other without its nerve and blood supply. The type of graft used is Autograft<sup>10</sup>. Urethral strictures are difficult to manage. In Ayurveda various treatments used. Some treatment modalities for urethral strictures are fraught with high patient morbidity and stricture recurrence rates; however, an extremely useful tool in the armamentarium of the Reconstructive Urologist is buccal mucosal urethroplasty. We use buccal mucosa grafts because of its excellent short and long-term results,

low post-operative complication rate. Acquired urethral stricture is common in men but rare in women<sup>11</sup>. Urethral stricture classified into six types<sup>12</sup>.

Classification A) Aetiologically 1) Congenital

2) Inflammatory

a) Post-gonococcal

b) Tuberculous.

c) Other infection (urethritis).

3) Traumatic: Bulbous, membranous.

4) Post-instrumentation: Catheter, dilator, cystoscope.

5) Postoperative: Prostate surgery (4%), urethrostomy.

Classification B)

1) Proximal - Common in bulbous urethra (70%).

2) Distal - Congenital (in the external meatus). Often traumatic in children.

Classification C)

1) Permeable: Permits urine to pass.

2) Impermeable.

Classification D)

1) Passable - Allows catheter to pass.

2) Impassable

Classification E) - It can be single or multiple.

Classification F) - According to the part involved.

1) Roof

2) Floor

### PRESENTATION OF CASE –

A 51 year male patient was complained with pain in abdomen, retention of urine, burning micturition from two days and pain in abdomen progressively worsen in 24 hours with presenting complaints patient was presented in surgery opd.

### PAST HISTORY -

Patient is known case of Diabetes mellitus since 2 years and he is on regular medication [ Tab. Dailyglim PM 2 daily 2 times ] . no history of surgical , family and anydrug allergy

### ON PHYSICAL EXAMINATION –

Patient was haemo-dynamically stable ( Blood pressure 130/80 mmhg , Heart rate 80 beats /min ) . there was tenderness is present over hypogastric region , bowel sounds are present . no any other abdominal scars or herniation were present . the genital area was normal and on per rectal examination no any external deformity seen, but on digital per rectal examination prostate is mildly enlarged . tinea infection seen on both buttock region .

### LABORATORY INVESTIGATION

Patient had no relevant Haemogram and urine routine , renal function test was normal .other lab investigation and blood sugar level was within

normal limit, Prostate specific antigen was also normal.

### ULTRASOUND OF ABDOMEN –

It revealed that there is mild splenomegaly , left renal calculi of 4 mm & and 3 mm , cortical scarring at left kidney ,cystitis ( urinary bladder is distended , irregular and thickened wall – 7 mm ).Enlarged prostate of volume - 32 CC , prevoid - 240 CC and postvoid - 75 CC

### RETROGRADE URETHROGRAM

- There was irregular tight short segment narrowing in the region of lower part of posterior urethra – membranous urethra with adjacent mild irregularity and no periurethral leak or collection .
- Minimal opacification of peri urethral glands noted .

Micturating Cyto- Urethrogram was not possible due to inability to catheterize .



Figure 1 : Retrograde urethrogram .

**OPERATIVE PROCEDURE:** Urethroplasty done for urethral stricture .  
Findings – Very deep stricture to bulbar urethra. buccal mucosa graft taken under local anaesthesia .

attached to posterior fascia of perineal wall and urethra. silicon catheterization done with silicon catheter number – 14. Procedure was uneventful .



FIGURE 2 : Buccal mucosal graft .

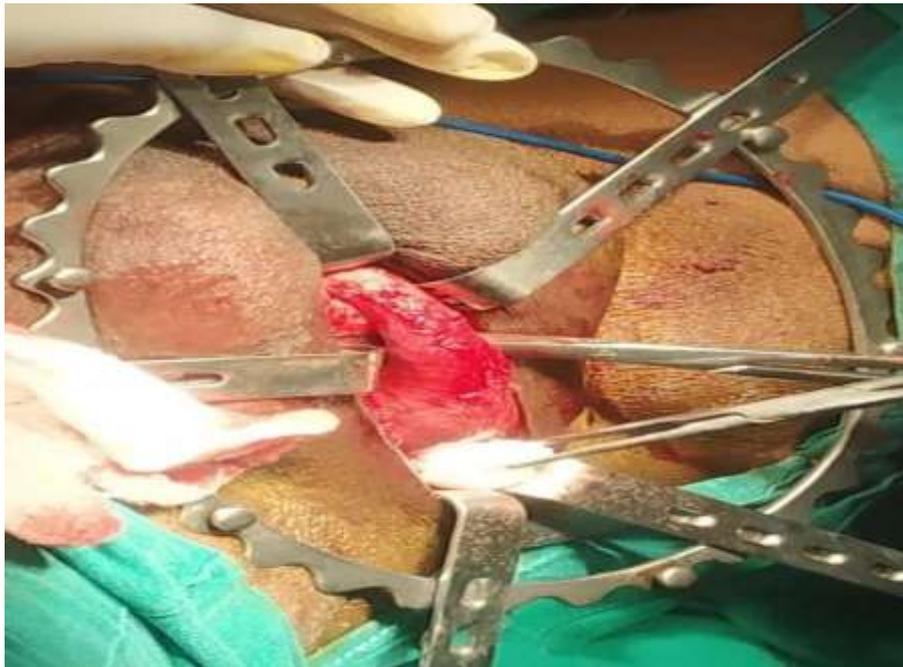


FIGURE 3 : Bulbar urethroplasty .

## II. DISCUSSION

We perform buccal mucosal urethroplasty even for short stricture and have all but abandoned the anastomotic urethroplasty. This is because we had higher success rates with the buccal technique and lower complication rates over identical observation periods. . The goal is to raise awareness of buccal mucosa grafting for the management urethral stricture disease. of the urethra . Buccal mucosa graft (BMG) was first

described for urethral reconstruction by Humby in 1941. Standard bulbar urethroplasties using buccal grafts should have a lifetime success rate approaching 92% .<sup>13</sup>

## III. CONCLUSION

In Ayurveda varies method used for urethral stricture that is uttarbasti <sup>14</sup>. Urethral reconstruction have developed in the past few decades the quest for an ideal substitute continues.

We critically review the literature on buccal mucosal grafts for substitution urethroplasty, to determine the efficacy and complications arising from its use. Buccal mucosal grafts have proved to be a versatile substitute for strictures attributable to a wide range of causes. Placing the graft dorsally appears to be more successful than ventrally and was successful in 96% of cases;. Thus, buccal mucosa is most likely to become the new gold standard for substitution urethroplasty and longer term results .

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