

# SUPRA - PUBIC CATHETERIZATION

Pages with reference to book, From 56 To 58

Syed Tariq ( Department of Surgery, Aga Khan University Hospital, Stadium Road, Karachi. )

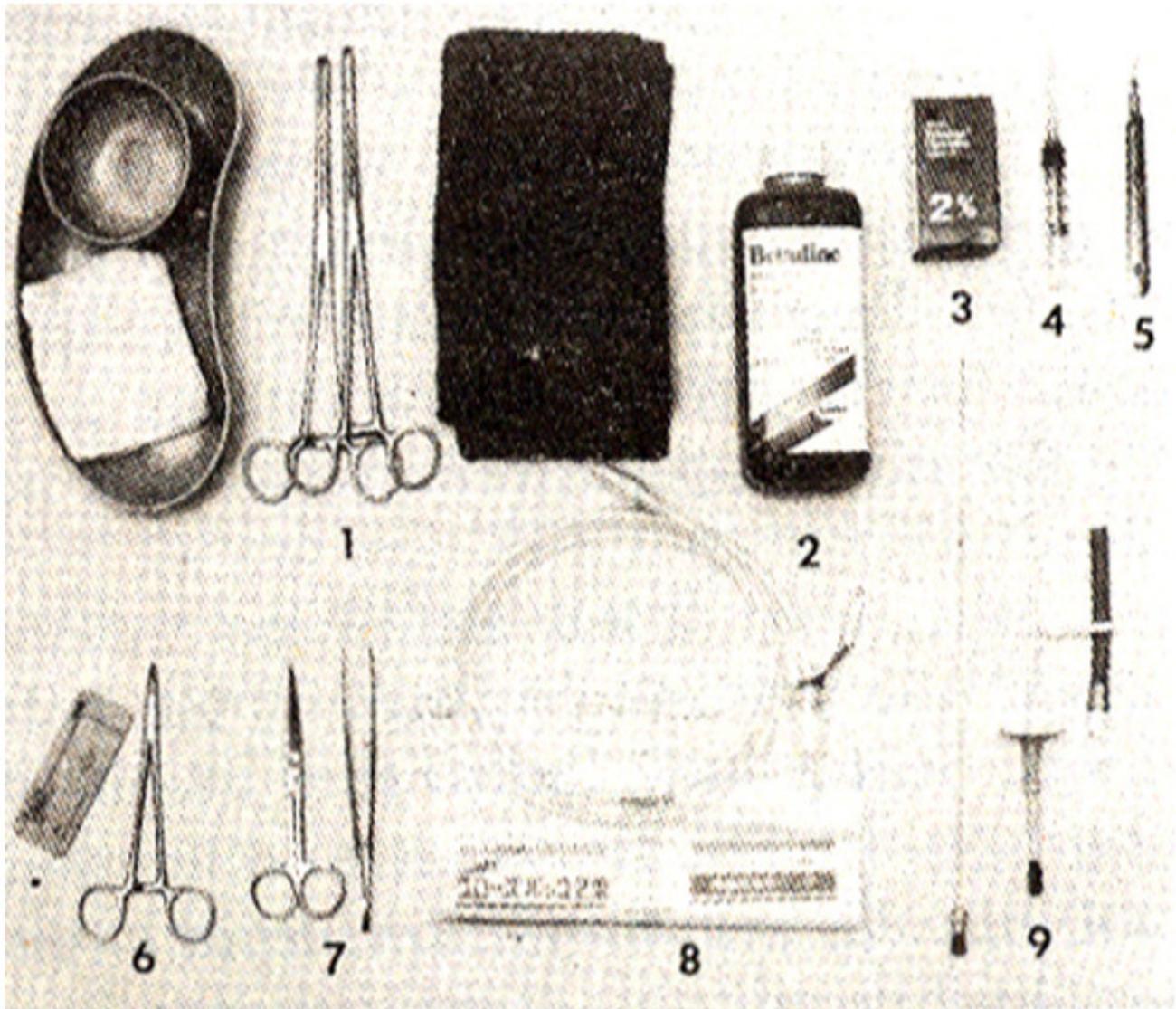
Kazim Shah, Tasneem Tariq ( Department of Gynaecology and Obstetrics, KPT Hospital, Kemari, Karachi. )

## INTRODUCTION

The only sure way to avoid catheter induced Urinary infection is to avoid catheterization, Even with careful technique, retrograde urethral catheterization is potentially hazardous and predisposes to bacteriuria. The prevalence rate of urinary infection in catheterized patients is 21.2%<sup>1</sup>. The infection may remain confined to the urinary tract eg. Prostatitis, epididymitis and pyelonephritis or spread systemically to produce septicaemia. Urinary tract infection associated principally with catheterization is the commonest source of gram negative septicaemia<sup>2</sup>. Suprapubic catheterization reduces the chances of urinary tract infection<sup>3</sup>. Although this method is preferred by some urologists as the primary procedure for acute or chronic urinary retention, the more usual indications for supra pubic catheterization are as follows:

1. Where urethral catheterization has failed or has resulted in urethral trauma.
2. In urethritis, chronic prostatitis and whenever there is a history of previous infection.
3. For temporary urinary diversion following urethral or vaginal repair.
4. When a Urethral catheter cannot be tolerated by the patient.
5. For post-operative urethral strictures.
6. In neurogenic bladders.

INSTRUMENTS AND EQUIPMENT (Figure 1)



**Figure 1. Instruments and equipments.**

1. Catheterization pack containing
  - a galilipot for antiseptic
  - gauze squares and sponge holding forceps
  - a kidney dish
  - sterile drapes
2. Betadine antiseptic solution
3. 2% plain lignocaine
4. 5 ml syringe and 21 gauge needle
5. scalpel and blade No. 15
6. 3/0 silk, cutting needle and a needle holder
7. Stitch scissors and a dissecting forceps
8. Urine drainage bag (closed drainage system)
9. Supra pubic catheter.

## **SUPRA PUBIC CATHETERS**

An LV. cannula is inappropriate because it slips out when the bladder is deflated. A long venous catheter is better but cannot be retained. Special suprapubic catheter sets are available:

(i) The Bonano catheter is perhaps the least traumatic, easy to use and can be retained for long periods. Each sterile pack consists of an 18G puncture needle, drainage clamp and a 14G radiopaque striped teflon catheter.

(ii) The Stamey's suprapubic catheter, a sterile pack consisting of a polyethylene malecot catheter which is 25 cm long (10, 12 and 14 F sizes), a matching hollow needle obturator and a 14F PVC connecting tube with stop cock intended for one time use.

(iii) An Ingram supra pubic catheter complete with a metal obturator is of a wider bore and so more traumatic, but provides good drainage. It comes in sizes of 12, 14 and 1 8F with a channel for the retaining balloon.

## **AFTER CARE**

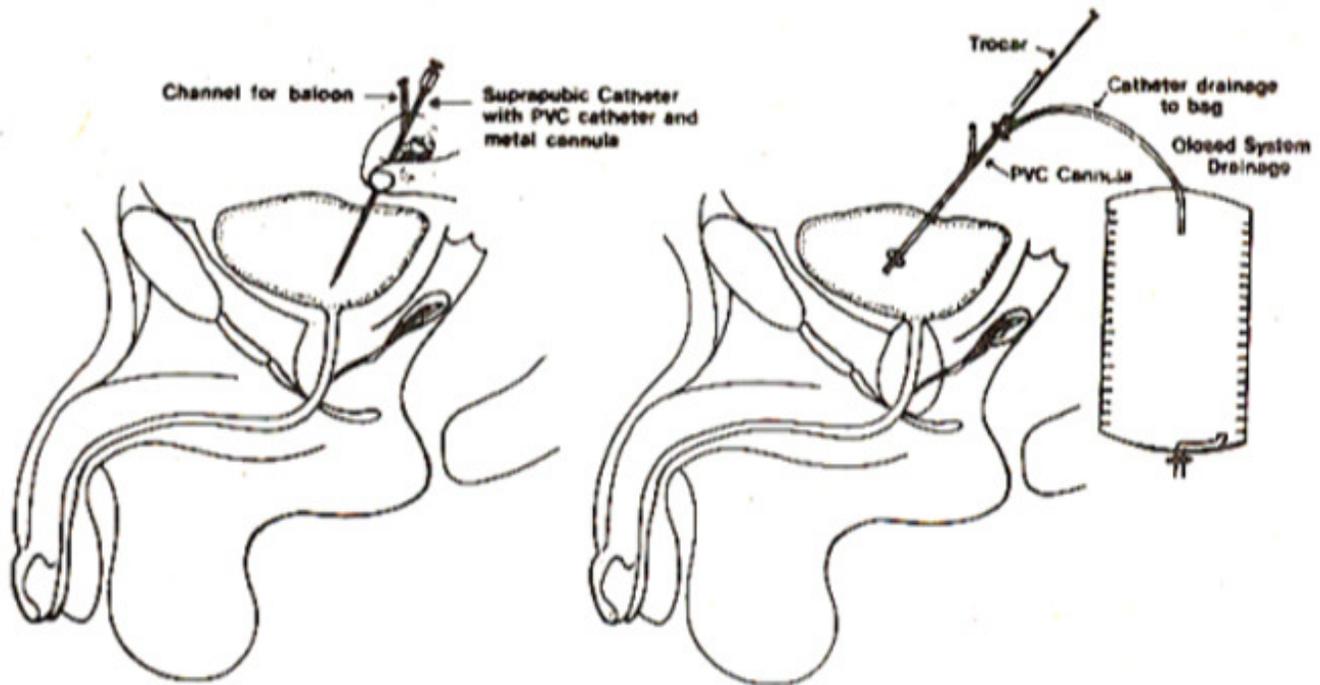
Prophylactic antibiotics are ineffective in preventing urinary tract infection<sup>3</sup>. While symptoms are masked with prophylactic antibiotics, the organisms became resistant and difficult to eradicate. Our practice is to take a specimen of urine at first catheterization and obtain sensitivity if there is significant growth, but to defer using antibiotics unless there is significant bacteriuria and pyuria which occurs in about 20% of patients who have suprapubic catheterization. The system should not be irrigated unless there is blockage. If necessary, it should be carried out with absolute sterility. In approximately 5—10 percent of the cases, particularly in the obese patient, the catheter fails to drain adequately and will need replacement or removal. A urethral catheter or a more formal suprapubic cystostomy may be required. Soakage from a leak around the catheter is unusual and indicates blockage or improper placement. Soakage may also occur as a result of a hyperactive detrusor responding to continuous trigonal irritation from blood clots, debris or the catheter itself necessitating a wash out or replacement. Inherent detrusor overactivity may be controlled with cholinergic drugs specific for bladder, e.g., Probanthine 15 mg TDS or Genurin 200 mg TDS until the problem is alleviated.

The dressing may need to be changed.

Kinking of the catheter should be avoided.

If the catheter is to be retained for more than a day or two, a leg bag should be provided so that the patient may be ambulated.

TECHNIQUE (Figure 2)



## Method of inserting Suprapubic Catheter

Figure 2. Technique.

Essential requirement

The bladder should be palpably distended.

### PREPARATION

The patient should be lying supine. Intravenous valium 5-10 mg or diluted Pethidine 50-100 mg before catheterization is helpful in the anxious and distressed patient. Site of suprapubic catheterization Following skin preparation and draping 2% lignocaine is infiltrated intradermally and into the deeper tissues, 2 cm above the pubic symphysis in the midline and a 0.5 - 1 cm transverse skin incision is made. The trocar of the suprapubic catheter set is introduced vertically backwards care should be taken not to point the needle too far upwards (in order to avoid peritoneal reflection) or downwards (in order to avoid the prostatic urethra). A slight give is felt as the trocar passes into the bladder and the urine can immediately be seen welling up in the sheath around the catheter. The trocar is withdrawn as the catheter is advanced into the bladder upto its hull or anchoring flaps and is connected to the urinary drainage bag. The anchoring flange or disc of the catheter is stitched to the skin with silk. If the retaining device is a balloon, this should be inflated to capacity. Removal of the Catheter after it has served its purpose is fairly simple. Stitches are divided and the catheter pulled out. A small sterile dressing may be left to cover the puncture site. If good urethral micturition is established, there is usually no significant leakage from the suprapubic site.

### REFERENCES

1. Meers, P.D., Ayliffe, GA), Emnierson, A.M. et at. Report on the national survey of infections in Hospitals 1980. J. Hosp. Infect., 1981; 2 (Suppi); 23.

2. Platt, R., Polk, B.F., Murdock, B. and Rosner, B. Mortality associated with nosocomial urinary-tract infection. *N. Engl. J. Med.*, 1982; 307: 637.
3. Mattingly, R.F. Post operative care of bladder, in operative gynecology. By Richard U. TeLinde 5th ed. Philadelphia, Lippincott, 1977.