

PRE - AND POST-OPERATIVE ORDERS ON UROLOGIC CASES

Pre-operative

1. Nothing by mouth after midnight.
2. S.S. enema in A.M. (If desire may give castor oil - ounces $1\frac{1}{2}$ at 4 P. M. before operation instead of enema).
3. Shave and prepare.
4. Nembutal gr. $1\frac{1}{2}$ at 7 P.M. and 1 hour before operation.
5. Morphine sulph gr. $\frac{1}{4}$) "H" before
Atropine sulph gr. $\frac{1}{200}$) going to O.R.
May give scopolamine - gr. $\frac{1}{200}$ if anesthetist prefers.
6. To O. R. on call.

Post-operative orders

1. Fluids and food as tolerated.
2. Other general orders as for abdominal cases.

3. Drains Kidney

Drains to renal bed out in 48 hours. Drain to stump of ureter out in 5 days.

If temperature remains elevated leave ureter stump drain in longer.

Bladder

Prevesical drain - out in 48 hours.

Freyer tube - 5 days.

Pezzer catheter - 10 days or longer.

Skin Clips

Alternate clips 3 days

Remaining clips 5 days

Silk Skin Sutures

10 days.

Special Orders

Prostate cases - no enemas until specifically ordered.

PREPARATION OF BLADDER CASE

1. Scrubbing of skin with soap and water for 10 minutes.

The preparation should extend well over the umbilicus, well over both sides over the hips, upper thighs, penis scrotum perineum. Retract foreskin and clean glans penis and surrounding foreskin thoroughly. Then replace foreskin.

2. Shaving of these areas before scrubbing.
3. Also shave over lower lumbar and upper sacral spine, if spinal anaesthesia is to be used.

THE CATHETER TABLE

The Catheter Table is under the jurisdiction of a specially trained attendant. His duties are:

1. To see that the table is properly set up.
2. To pass a urethral catheter and fill and empty the bladder on command of the surgeon.
3. To place a gloved finger in the rectum where occasion demands (also under direction of the surgeon).
4. To be in constant attendance at his table until dismissed by the surgeon.

After the patient has been thoroughly scrubbed and prepared, the urethra is washed out with sterile water using a syringe. The catheter is then passed into the bladder and fixed in place. The bladder is then drained, following which it is irrigated with sterile water - 3 - 5 washings with 50 cc each are usually adequate. A sterile cork is then placed in the catheter and the operation begins. The suprapubic incision is made. When ordered to do so the attendant begins to fill the bladder with sterile water using the 100 to 150 cc syringe. He fills the bladder with 300 - 400 cc of fluid - calling out the total amount injected at every 50 cc. Thus 50 cc, 100 cc, 150 cc., etc. When the syringe is refilled the catheter is corked to prevent the already injected fluid from escaping. On order from the surgeon the attendant stops filling the bladder and corks the catheter. Then an interval of 5 minutes follows during which the surgeon frees the bladder wall and grasps it with forceps. On order from the surgeon the attendant empties the bladder and informs the surgeon when the bladder is empty. When the operation is completed the catheter table attendant puts on the sterile dressing on the wound - applies the binder and sees to it that the supra-pubic tube is properly taken care of. (see care of supra-pubic drainage) He then accompanies the patient to the ward and hooks up the drainage system.

Remarks: The catheter table attendant has a very important and very responsible job. An operation may be delayed as much as 30 - 45 minutes if he is not alert, deft, and trained to his work. He must be an expert at catheterization, must know how to handle a syringe expertly, must know how to dress a supra-pubic case and must have acquired a respect for the supra-pubic tube and its proper attachment to its drainage system. He must remain in constant attendance at his table and must be on his toes. He must be responsible, and take an interest in his job.

CATHETER TABLE - SET UP

1. #16 or #18 urethral catheter
2. 100 - 150 cc syringe
3. Sterile water or physiological salt solution (1000 cc - 1500 cc)
4. Container, for water
5. Pus basin
6. Lubricant
7. 1 inch gauze bandage
8. 1 inch adhesive
9. Rubber gloves - 1 pair
10. Several catheter corks - (wooden gulf tees are excellent).

METHOD OF TYING IN CATHETER

16" length of gauze is split lengthwise down the middle and each half rolled to form a cord. The two are tied in a knot around the catheter and fixed to the penis with a surrounding length of adhesive.

Note - If so desired the bladder may be filled with an overhead irrigation instead of a syringe. In that case a Y tube is attached to the catheter. One arm of the Y is then attached to the irrigator by means of several feet of rubber tubing. A 5 foot length of tubing is then attached to the other arm and placed in a 1/2 gal. bottle at the foot of the table which contains 16 oz. of sterile water. Clamps are applied to both irrigator and bottle tubes. The bladder is filled by releasing the irrigator clamp and emptied by closing the latter and releasing the bottle clamps. The system must be free of air and the bladder must be empty before the operation starts.

Caution: Have the above ready and set to go before the operation starts.

CATHETERIZATION OF THE MALE

1. The hands are carefully scrubbed with soap and water.
2. The head and shaft of the penis are carefully washed with soap and water. If the foreskin can be retracted, this should be done first before washing the penis. After completing the catheterization replace foreskin (pull it forward). Be sure that inner layer is well pulled forward in case of tight foreskin because this inner layer may form a constricting band over the head of the penis even though this is not visible from the outside.
3. One sterile towel is placed below the penis over the thighs and another above the penis on the lower abdomen.
4. Rubber gloves are put on.
5. The catheter is lubricated by wiping on the lubricant with a piece of gauze.
6. The penis is firmly grasped with the left hand and stretched well forward and upward. The catheter is inserted with the right hand.
7. The urine is allowed to drain off and the total quantity is measured. A specimen is saved for examination.
8. 10 cc. of 1/2 % protargol or 5 % argyrol is injected into the bladder through the catheter and the latter is withdrawn, leaving the medication in the bladder.

Precaution:

1. Always proceed with maximum asepsis.
2. Place penis well on a stretch while inserting catheter. This renders introduction easier.
3. Be gentle! If catheter does not slide in with ease, something is wrong. Do not use force! Inform Ward Officer.
4. Always wear a mask throughout the entire procedure.
5. Record following data on chart:
 - a. Time of catheterization
 - b. Quantity of urine in cc.
 - c. Character of urine visible
 - (1) Clear or cloudy
 - (2) Color: straw, amber, reddish, dark red, milky, etc.
6. Always replace foreskin completely after catheterization.

INSERTION AND CARE OF THE INLYING CATHETER

This requires skill, diligence, and experience.

1. The catheter is passed under aseptic precautions until the urine drains from the bladder.
2. The catheter is withdrawn to just the point where the urine stops draining. This indicates that the eye of the catheter is just outside the internal urethral orifice. The catheter is pushed back in exactly $3/4$ inch.

In exactly this position the catheter is fixed to the penis.

This places the eye of the catheter about $3/4$ inch in the bladder. This is the ideal location for proper and complete drainage. If the catheter is too far in, it will not drain properly and a varying quantity of urine will always remain in the bladder. Such a catheter will also cause pressure against the bladder ^wall and it will cause irritation, pain, and eventual decu^bitus. If the catheter is too far out, it will not drain and the bladder will contain a varying quantity of urine. Urine may ^flow from such a catheter, but only after traversing a part of the urethra first; and this is usually accompanied by discomfort or pain.

The mere fact that urine drains from a catheter does not indicate that the latter is emptying the bladder.

3. The catheter is irrigated with sterile saline (physiological) using an aseptic syringe. 15 - 30 cc. are injected and allowed to drain out. This is repeated several times. If the eye of the catheter is in the proper place, the fluid will promptly drain out of the catheter, it will flow smoothly, and the stream will terminate gradually. Sudden or jerky final stoppage of the stream usually indicates that the catheter has not been properly inserted. This check after tying the catheter in, is very important and gives assurance that it is actually in the right place.

4. 10 cc of 1% protargol or of 5% argyrol is injected into the bladder through the catheter and a catheter cork (sterile) is inserted. The cork is removed after 1/2 hour and the bladder is allowed to empty.
5. The bladder is irrigated with sterile solution ^(boric or saline) every 24 hours, after which 10 cc. of 1% protargol or of 5% argyrol is instilled and allowed to remain in the bladder for 1/2 hour.
6. The catheter is changed every 48 hours. The procedure is as follows:
 1. The bladder is irrigated
 2. The penile bandage is removed.
 3. The urethra is irrigated through the catheter as the latter is being withdrawn.
 4. A sterile catheter (or the same one after it has been thoroughly cleaned and boiled for 10 minutes) is reinserted as described above.

Before the inlying catheter is inserted the patient is thoroughly shaved over the supra pubic area, penis, scrotum, upper thighs. The parts are then carefully and thoroughly washed with soap and water and dried. The foreskin should be retracted and the glans penis and coronal sulcus should be very thoroughly washed, being very gentle at this point because these parts are very tender. The patient is then thoroughly dried, and the foreskin is drawn forward to its normal position. The genitalia of the patient with an inlying catheter must be kept scrupulously clean. Whenever the catheter is changed (~~WEEKLY~~ every 48 hours) is an excellent time for a good cleaning up. If the penile bandage becomes wet or soiled it should be changed. Always remember that the urethral catheter serves as a bladder splint. It places the bladder at rest by keeping it constantly empty. If it is properly fixed and serviced, the patient will be comfortable; he will remain free of fever; and his urine will ~~comfortable; he will remain free of fever; and his urine will usually remain or quickly become clear.~~

If the catheter is not in the proper place the bladder will not remain empty, the patient will be uncomfortable, the stagnant urine will become infected, it will become cloudy, and the patient will probably develop fever. If the penile bandage is too loose the catheter will fall out. If it is too tight the patient will complain of pain, and the head of the penis will probably become swollen.

The bandage must be just right!!

A catheter may become blocked by clots, debris etc. If it doesn't drain properly irrigate it, after which it will usually again function properly. If it still does not drain well it is probably not in the proper position and requires readjustment. If the latter is not successful, put ⁱⁿ a fresh catheter.

Always remember that an inlying catheter must drain freely to be of value. If it does not do so, it is a menace.

If the patient has

pain)	there is something
fever)	wrong with the catheter.
cloudy urine)		<u>Investigate</u>

Some people will temporarily have an idiosyncrasy to the catheter and will, despite all efforts, develop fever. In such cases the catheter is removed and the patient receives periodic catheterization (every 8 hours) until the fever has subsided and the temperature has remained normal for 48 hours. The inlying catheter may then usually be reinserted.

1. Patients with inlying catheter should receive some form of urinary atesepticas

urotropin gr X)	4 times daily
ammonium chloride gr XV)	
or		
Sulfathiazole gr XV daily		

2. The daily intake and output of fluids should be charted.

The attendant who services the inlying catheters must look upon these patients as his personal responsibility. He must approach his job with interest and enthusiasm. If he does his work well the patients will thrive, other wise he will find that the neglected catheter is one of the most effective means of killing his patients.

Methods of draining the Urine from the catheter.

1. The end of the catheter may be allowed to drain into a sterile urinal.
The neck of such a urinal must be supported with a towel to keep it from tipping and spilling.
2. The catheter may be attached to a 4 - 5 foot length of 3/8" rubber tubing with a glass connector. The end of the tubing is placed in a 2 quart bottle containing 16 ounces of sterile water, which stands on the floor at the side of the bed. The tubing must have sufficient slack and must be attached to the mattress with adhesive tape and a safety pin (see under supra-pubic drainage) to prevent a drag on the catheter.
3. The catheter may be plugged with a cork which is removed to allow the bladder to empty q. 4 hours. The end of the catheter ~~and~~ cork are covered with sterile gauze fixed in place with a rubber band and covered with a sterile towel, to keep the end of the catheter clean.
4. The procedure is as in (2) except that the tubing is clamped. It is temporarily unclamped every 4 hours to allow the bladder to empty.
The syphon action of bottle drainage may cause discomfort. In some cases the catheter will not drain well with such a hook-up. In either instance the catheter should be allowed to drain into a urinal instead.

If syphon drainage is used see that the tube does not kink and that the patient does not lie on the tube.

The tubing should be changed every 48 hours.