

Urology Terminology

CBD	Continuous Bladder Drainage
TURP	Trans Urethral Resection of Prostate
TURT	Trans Urethral Resection of Tumour
BNI	Bladder Neck Incision
Cystectomy	Removal of the bladder
Cystoscopy	Examination of the bladder using a telescopic instrument
Flexible Cystoscopy	As above using a flexible telescope
Nephrectomy	Removal of the kidney
Nephrostomy	Drain inserted through the skin into the kidney
ISC	Intermittent Self Catheterisation
ISD	Intermittent Self Dilatation
Optical Urethrotomy	Excision of urethral stricture/ narrowing
PUJ	Pelvic-ureteric junction
PCNL	Percutaneous Nephrolithotomy (Lithotomy- incision into kidney for removal of stones)
MSU	Mid-Stream Urine
CSU	Catheter Specimen of Urine
Circumcision	Resection of the foreskin
Micturition(Urination)	Passing urine
IVU	Intravenous Urogram
KUB	X-ray of Kidney, Ureter & Bladder
Litholopaxy	ladder or kidney and removal of fragments

Lithotripsy	The procedure which uses shock waves to break up stones that form in the kidney or bladder
USS	Ultra Sound Scan
Biopsy	Taking a sample of tissue for analysis
UTI	Urinary Tract Infection
PSA	Prostate Specific Antigen
Cystogram	X-Ray test involving instillation of radio-opaque dye into bladder
Hydronephrosis	Swelling and enlargement of the kidney due to urine being unable to leave and the build-up of back pressure
Orchitis	Inflammation of the testis
Paraphimosis	The inability to replace the foreskin in its normal position
Phimosis	Inability to retract foreskin
Prostatitis	Inflammation of the prostate
Pyelonephritis	Infection & inflammation of the kidney and the renal pelvis

Routine Urine Testing.

Usually, on admission, urology patients' have their urine tested on the ward. This routine ward urine test can detect or rule out primary infection. A sterile urine sample (MSU) or catheter urine sample (CSU) is obtained and tested on our urine analysis machine that provides a digital printout of results.

- Observe and demonstrate the use of the urine analyser and discuss with your mentor its appropriate use and discuss the need to inform doctors of the results.

Residual Volume Ultrasound Scan.

This scan is carried out on the ward involving the use of our portable scanner to measure the amount of urine in the bladder using ultrasound waves. It allows staff to recognise if the patient is in retention allowing for appropriate and timely treatment.

No preparation is required prior to the procedure apart from asking the patient to void before the scan is performed.

The head of the scanner is placed on the patients' lower abdomen in the area of the bladder, using scanning gel to allow conduction of the ultrasound waves. The scanner head is held in position until the residual volume is monitored (few seconds).

- Observe and demonstrate the use of the bladder scanner and discuss with your mentor its appropriate use and the following interventions.

Catheterisation.

The indication for catheterisation depends usually on the residual volume of urine. Depending on the reason for catheterisation will depend on the type of catheter used.

- Discuss the reasons for catheterisation and the different types of catheters used. Why and when are 3-way (triple lumen), short term and long term catheters used? Discuss the catheter size of choice.
- Discuss the difference between acute and chronic retention and try to find out about which medication is frequently given for male retention.
- In chronic retention, find out which blood tests are carried out frequently and why accurate fluid balance monitoring is essential.

Fluid Balance monitoring.

One of the most crucial elements of the nurse's role in the care of particularly urology patients is monitoring fluid intake and output.

On average, patients lose approximately 500mls daily through 'insensible' loss, i.e. water lost through the skin, lungs and bowels. The daily urine output demonstrates the volume that the kidneys can 'handle'. Excessive fluid intake above this volume can result in fluid overload and cardiac failure. Accurate fluid balance recording is, therefore, essential in providing the patient with enough fluids but avoiding fluid overload. There is evidence to suggest that fluid balance recording is not as accurate as it should be.

It is especially important to accurately monitor the fluid balance for patients following urology surgery i.e. TURP/ TURT when bladder irrigation is in situ and to observe for TUR syndrome and act accordingly if any signs and symptoms are present.

TUR SYNDROME

Patients with liver disease, UTIs, significant muscular atrophy, bladder stones, or obstructive uropathy have a greater risk of developing TUR syndrome, though any patient could experience this complication. TUR Syndrome can occur when patients absorb large volumes (greater than 2 litres) of irrigation fluid free of electrolytes, into the circulation during endoscopic procedures e.g. TURP, TURBT or PCNL. It occurs in approximately 0.5% of TURP's producing hypervolemia, and dilutional hyponatremia, as well as hyperkalaemia that can cause changes in mental status and visual disturbances.

Therefore it is important that during the procedure, oxygen saturations, electrocardiogram, and serum sodium levels are monitored.

Perioperatively, glycine bladder irrigation is used in cystoscopic resection due to the non-conductive properties when using the diathermy.

As with all surgery involving glycine bladder irrigation, there is a real possibility of the patient experiencing TUR syndrome due to the absorption of the glycine in theatre. (Glycine is one of the 20 amino acids commonly found in proteins).

Biochemical, hypodynamic and neurological disturbances occur.

Dilutional hyponatremia is the most important – and serious – factor leading to the signs and symptoms. The serum sodium falls for the patient to become unwell.

Signs & symptoms.

Symptoms of TUR syndrome include abdominal pain, arterial hypotension - due to fluid overload, bradycardia, nausea and vomiting, confusion, visual disturbance possibly due to the fact that glycine is a neuro transmitter in the retina, & seizures. If the patient is awake (during spinal anaesthetic) they may report visual disturbances, flashing lights.

The nurse needs to be vigilant for TUR syndrome – observing for a rise in blood pressure and for reduced urinary output; on occasions, the patient will

complain of flashing lights in their eyes or even blindness. It is treated by monitoring serum, urea and electrolytes (usually sodium will fall) and the administration of IV saline 0.9%. Natural reaction for the inexperienced would be to give IV furosemide because it appears that the patient is overloaded. Discussion surrounds the value of this however, most experienced staff decides not to give furosemide, because it appears to worsen the effects, and the lower the serum sodium even further.

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