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Chapter IV



## Urinary System

### History :

- Risk factors
- Urological Emergencies
- Haematuria
- Acute Urinary Retention
- Incontinence/ Dysuria

### Renal pathology

- Congenital Abnormalities
- Kidney Stones

### Investigations

- Diagnostic test
- Treatment
- Surgical procedures

**THE URINARY SYSTEM** consists of all the organs involved in the formation and release of urine. Otherwise, it filters waste material and water from the blood and excretes it from the body as urine. The components of the urinary system include kidneys, ureters, bladder and urethra. From the kidneys, urine travels down two thin tubes called ureters to the bladder. During urination, then, urine passes from the bladder through the urethra. During the urinary system assessment, a nursing student will use the skills of inspection, auscultation, percussion and palpation. Therefore, a patient's history of elimination includes a review of elimination patterns, elimination symptoms and anything that affects the patient ability to urinate. The assessment will attempt to determine the problem, onset, duration, predisposing factors and the severity of the problem.

## Questions on the patient's history and the chief complaints or symptoms

### 1-Urological Emergencies

- What problems do you have with urination?
- How often do you urinate?
- Do you have any difficulty urinating?
- Do you get up to urinate in the night? / How often?
- Do you have any pain or burning when you urinate?
- Have you ever lost control of your urine?

### 2- Haematuria: is blood in the urine.

- Have you noticed any blood in your urine?
- If yes, do you have any burning or pain with the blood?
- Have you noticed any clots in your urine?

**3- Acute Urinary Retention:** is the inability of the patient to empty his bladder. It can be associated with urinary leakage, dribbling and overflow incontinence.

- How much urine do you pass when you urinate?
- What is the approximate amount of fluid you drink in a day?
- What medications do you take?
- Do you feel like you empty your bladder when you urinate?
- Do you urinate frequently or in small amounts?

**4- Dysuria:** is defined as difficulty urinating. It happens when a patient experiences discomfort such as pressure, pain or burning when passing urine. It may be due to a lower urinary tract infection (UTI) Incontinence: is the inability of a patient to control the passage of urine.

- Was the onset of dysuria gradual or did it happen all of a sudden?

- How long have you had the pressure, pain or burning sensation?
- Do you feel the pain in any other part of your body?
- Have you ever had this problem in the past?
- Have you done anything to try to alleviate the symptoms?
- Was anything effective in relieving the symptoms?

**5- Urgency:** is an intense desire to urinate immediately and sometimes it can lead to incontinence. Frequency: is when the patient voids more frequently than what is usual for the patient.

- How long have you had these symptoms?
- How often do you have to urinate?
- Are you able to empty your bladder each time you urinate?
- Do you have any other symptoms with the urgency and frequency such as pain or burning?
- How much fluid to drink each day?

**Kidney Stones Signs and Symptoms:** In general, kidney stones show no symptoms until they move into the Ureter. Once these stones enter the Ureter, the following symptoms are usually seen.

- 1- Sharp pain in the groin region and side areas
- 2- Signs of blood while passing urine (haematuria)
- 3- Frequent nausea and vomiting
- 4- Pus observed in urine (pyuria)
- 5- Passing less amount of urine
- 6- Burning and itching sensation when passing urine
- 7- The frequent feeling of urination
- 8- Sometimes, the occurrence of fever/chills

**Kidney Stones Diagnosis and Testing:** If your doctor observes the symptoms related to kidney stones problems, he/she may advise you a few diagnostic tests and procedures such as following: Try to link each term with the corresponding definition.

- ✚ Blood Tests: to inform about the presence of too much calcium or uric acid in your blood. It helps doctors to check the health of your kidney.
- ✚ Urine Testing: to have two urine collections for two consecutive days to assess the amount of stone forming minerals present in your urine.
- ✚ Imaging Tests: include simple abdominal X-rays, CT scan and ultrasound to reveal the presence of kidney stones in your urinary tract. One advanced test is intravenous urography where a dye is injected into an arm vein and x-rays or CT images are taken as dye travels through kidney and bladder.
- ✚ Analysing passed Kidney Stones: to pass urine through a strainer so kidney stones passing through urine can be collected and analysed in a lab.