Endoscopy

Endoscopy

Cystoscopy To further evaluate urinary symptoms, the entire lining of the urinary tract can be directly visualised from the urethra - -). and bladder (using a cystoscope) to the ureter and renal pelvis (using a semirigid ureteroscope), and finally the renal calyces (using a flexible ureteroscope). Cystoscopy can be under - taken either as flexible cystoscopy (Figure 81.4), using local anaesthesia, or as rigid cystoscopy (Figure 81.5), preferably under a general anaesthetic. Telescopes with di ff erent fields of le (0°, 12°, 30° and 70° lenses are commonly view are availab used). In the operating theatre, most endoscopic procedures, including cystoscopy , require a urology stack consisting of a camera, monitor, light source, electrocautery and insu ffl ator for laparoscopy procedures (Figure 81.6). The male urethra is longer than the female urethra and is angulated at the level of the symphysis pubis (Figures 81.7–81.12). Flexible cystoscopy is thus relatively poorly ted in young males, in whom it may be uncomfortable. It is tolera principally a diagnostic tool but a few minor procedures can be

Figure 81.2 White urine seen in chyluria (courtesy of Dr TC Goel, Emeritus Professor of Surgery, King George’s Medical University, Lucknow, India). (b) Figure 81.3 Haematochyluria with milky-red urine (a) ; the blood settles after some time, leaving chyluria above (b) (courtesy of Dr TC Goel).

accomplished using the flexible cystoscope, such as insertion/ removal of ureteric stents, small biopsies and diathermy/laser of small bladder lesions. More can be achieved with a rigid cystoscope under general anaesthesia, especially in relation to instrumentation of the ureters. Summary box 81.6 Cystoscopy /uni25CF /uni25CF /uni25CF Ureteroscopy Ureteroscopy can be performed as both a diagnostic and a therapeutic procedure. A rigid or semirigid ureteroscope can be used in the ureter as far as the renal pelvis, but to inspect or operate on the renal pelvis or renal calyces a flexible uret - eroscope is, generally , needed (Figure 81.13). The procedure is most often performed when pathology , commonly stones, strictures or tumours, of the ureter is suspected.

Figure 81.4 Flexible cystoscope with attachments for irrigating /f_l uid (black arrow), instruments (red

arrow), and connection to video equip ment (blue arrow). (a) (b) (c) (d) Figure 81.5 Parts of a rigid cystoscope. Telescope (a) , obturator (b) , sheath (c) and bridge (d) . The obturator is inserted into the outer sheath for blind insertion of the cystoscope sheath – usually in females. The light cable and camera are attached to the telescope, which replaces the obturator in blind insertions. In males, the bridge is attached to the sheath to provide additional length and the telescope is placed through the

bridge for insertion of the cystoscope under vision. Can be performed with either a rigid cystoscope under general anaesthesia or a /f_l exible cystoscope under local anaesthesia Flexible cystoscopy is principally a diagnostic procedure Rigid cystoscopy allows more procedures to be performed (a)

(b) (c) (d) (e) Figure 81.6 The urology stack. In this stack, from top down, are the monitor (a) , insuf /f_l ator for carbon dioxide for laparoscopy (b) , camera connector (c) , light source (d) and a video recording device (e) .

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