Methods of performing prostatectomy

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The prostate can be approached (1) transurethrally (TURP); (2) retropubically (RPP); (3) through the bladder (transvesically; TVP); or (4) from the perineum (Figure 84.11). Transurethral prostate surgery Transurethral resection of the prostate TURP remains the most commonly performed procedure for the surgical correction of BOO. Perhaps the greatest advance in the history of transurethral surgery was marked by the development of the rigid lens system of Professor Harold Hopkins. His lenses, illuminated by a fi breoptic light source, permit unparalleled visualisation of the working fi eld. Men with indwelling catheters, those with recent urinary infection, those with chronic retention or those with prosthetic material or heart valves benefi t from prophylactic antibiotics in addition to the standard for clean surgery at induction of anaesthesia. Strips of tissue are cut from the bladder neck down to the level of the verumontanum (Figure 84.12). Cutting is performed by a high-frequency diathermy current, w applied across a loop mounted on the hand-held trigger of the resectoscope. Coagulation of bleeding points can be accu rately achieved. The ‘chips’ of prostate are then removed from the bladder using an Ellik evacuator. Resection proceeds at 1 g/minute in experienced hands. The duration of resection for monopolar TURP is limited to 1 hour due to the risk of r esorption of water if 1% glycine is used as an irrigant. The advent of bipolar TURP where normal saline is used as an irrigant permits resection of larger prostates. Following TURP , careful haemostasis is performed, and a three-way , self-retain ing catheter irrigated with isotonic saline is introduced into the bladder to prevent any further bleeding from forming blood clots. Irrigation is continued until the outfl o w is pale pink, and the catheter is usually removed on the second or third postop erative day . In men with small prostates or bladder neck dys synergia or stenosis, it is better to divide the bladder neck and prostatic urethra with a Collins knife or laser. Laser prostatectomy Laser can be used to ablate or vaporise (e.g. green light laser) or enucleate (e.g. HOLEP) the prostate. Photoselective vaporisa tion of the prostate or green light laser has the advantage that vaporisation is haemostatic and this procedure can be performed even while patients are anticoagulated; howe ver, it is unsuitable for a very large gland. In holmium laser enucleation of the prostate (HOLEP), laser is used to cut all the attachments of Harold Horace Hopkins , 1918–1994, Professor of Applied Optics, University of Reading, Reading, UK, invented the rigid rod endoscope (Hopkins’ rod, 1954) and contributed to the development of the fi bres for fl exible endoscopes. Milo Ellik , 1905–1975, American urologist, developed the Ellik evacuator in 1937. Terence John Millin , 1903–1980, surgeon, Westminster Hospital, London, UK, and honorary surgeon, All Saints’ Hospital for Genitourinary Diseases, London, UK, described the operation of retropubic prostatectomy in 1945. He was regarded as ‘the greatest of Irish urologists’ and ‘the pioneer of the retropubic space’. To facilitate his operation, he devised a self-retaining retractor that goes by his name and the ‘boomerang’ needle to close the prostatic capsule. He used to be invited all over the world to operate on VIPs. He was a former President of the Royal College of

Surgeons in Ireland. He gave up operating at the age of 57 to enjoy his farm in County Wicklow , where he died of laryngeal carcinoma. He played international rugby for Ireland. Frederic Eugene Basil Foley , 1891–1966, urologist, Ancker Hospital, St Paul, MN, USA. the adenoma to the false capsule and simultaneously coagulate any of the small vessels crossing the relatively avascular plane between the peripheral and transitional zones of the prostate while the tip of the cystoscope is used, much like the surgeon’s fi nger in Millin’s prostatectomy , to enucleate the transitional zone adenoma. The enucleated adenoma is pushed into the bladder, where it is morcellated and extracted via the cysto - scope. Damage to the external sphincter is avoided provided hich is the verumontanum is used as a guide to the most distal point of the resection/vaporisation/enucleat ion. -

Figure 84.12 For transurethral resection of the prostate the resectoscope is inserted transurethrally. Electric current is passed through a diathermy loop at the end of the instrument. The surgeon moves this back and forth to create a cavity using diathermy to cauterise as they go. The resultant chips are washed out of the bladder intermittently throughout the procedure. A visual image of the operative /f_i eld is transmitted through lenses running in the middle of the resectoscope. Around this lens, irrigating /f_l uid is instilled and /f_l ows out, washing blood away from the operative /f_i eld. The procedure is complete when an adequate channel has been created through the prostate. is removed Prostate Resectoscope

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