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| **2I — Surgical intervention for benign prostatic hyperplasia** |
| **Summary of Intervention** |
| Transurethral resection of prostate (TURP) is a therapeutic procedure involving removal of tissue from the inner aspect of the prostate using diathermy, via an endoscopic approach. It is commonly undertaken for voiding lower urinary tract symptoms (LUTS) presumed secondary to benign prostatic hyperplasia (BPH). TURP is undertaken on an in-patient basis, with a catheter left in-situ for 24-48 hours post-op for the purpose of irrigation. TURP may be undertaken under either general or spinal anaesthesia. TURP causes temporary discomfort, occasionally pain, haematuria and is associated with small risks of infection and acute urinary retention after removal of the catheter. There is also a risk of sexual dysfunction following TURP. There are small but significant risks of significant harm, including severe fluid and electrolyte imbalances associated with absorption of large volumes of irrigating fluid (TUR syndrome). TUR syndrome can be avoided by using bipolar diathermy, a variant of the standard technology.  TURP is the longest established of a range of endoscopic surgical procedures for benign enlargement of the prostate, with varying indications and potential complications. These include, among others:  — Transurethral incision of the prostate (TUIP) or Bladder Neck Incision (BNI)  — Holmium LASER enucleation of the prostate  — 532 nm (‘Greenlight’) laser vaporisation of the prostate  — UroLift  — Transurethral needle ablation of the prostate (TUNA)  — Transurethral vaporisation of the prostate (TUVP)  — Transurethral water vapour therapy (Rezum).  Open simple/benign prostatectomy is uncommonly undertaken in men with very large prostates and problematic symptoms. Newer ablative therapies are currently under evaluation and non-surgical procedures such as prostatic artery embolisation (PAE).  **This guidance applies to male adults aged 19 years and over.** |
| **Number of interventions in 18/19** |
| **14,561** |
| **Proposal** |
| Only men with severe voiding symptoms, or in whom conservative management options and drug treatment have been unsuccessful, should be offered surgical intervention. Surgery is indicated (in healthy men) in complicated BPH i.e. chronic retention with renal impairment as evidenced by hydronephrosis and impaired GFR, and in most cases of acute retention secondary to BPH.  As such, a staged approach to managing voiding LUTS is recommended:  1. Conservative, or lifestyle interventions should be discussed.  2. Drug therapy should then be considered, in the context of more bothersome LUTS, or LUTS not responding to simple lifestyle interventions.  3. Where bothersome LUTS persist alongside high, or unchanged International Prostate Symptom Scores, or in the context of urinary tract infections, bladder stones or urinary retention, surgical intervention should be considered using a shared decision-making approach.  Men considering surgical intervention should be counselled thoroughly regarding alternatives to and outcomes from surgery. The quality of this counselling is deemed to be of major importance with respect to men’s future experience and outcomes.  Following a discussion about whether to intervene surgically, men should be counselled about their preferred and most suitable surgical modality, incorporating reference to available evidence. Practical concerns, including the distance required to travel to pursue a given modality of surgical treatment are also important.  Appropriate support shoulder be provided to make shared decisions pertinent to physical, emotional, psychological and sexual health. If appropriate, carers should be informed and involved.  With respect to surgical modality:  — The UroLift system relieves lower urinary tract symptoms while avoiding the risk to sexual function and should be considered as an alternative to current surgical procedures for use in a day‑case setting in men who are aged 50 years and older and who have a prostate of less than 100 ml without an obstructing middle lobe  — TURP, TUVP (including laser prostatic vaporisation) or HoLEP should be offered to men with voiding LUTS presumed secondary to BPH  — HoLEP should be performed within centres specialising in the technique, or where mentorship arrangements are in place  — TUIP should be offered to men with a prostate estimated to be smaller than 30ml  — Open prostatectomy should only be offered as an alternative to endoscopic surgery, to men with prostates estimated to be larger than 80-100ml  — Transurethral needle ablation, transurethral microwave thermotherapy, high‑intensity focused ultrasound, transurethral ethanol ablation of the prostate should not be offered as alternative surgical treatments for voiding LUTS presumed secondary to BPH.  Of note, some men with bothersome LUTS will have undergone multichannel cytometry, establishing clear evidence of bladder outlet obstruction. These men are the most likely to benefit from surgery, with guidance on when  to undertake such assessment covered elsewhere in NICE and European guidelines. |
| **Rationale for Recommendation** |
| NICE guidance provides clear evidence, in clinical and cost-effectiveness terms, that patients voiding LUTS presumed secondary to BPH, should be offered surgical intervention, only when those symptoms are severe, or when conservative management options have been unsuccessful. TURP has long been the mainstay of surgical treatment for voiding LUTS presumed secondary to BPH. The newer surgical modalities outlined above have therefore been evaluated in comparison with TURP, as well as conservative management. NICE CG97 accordingly incorporated a  comprehensive matrix of comparative studies between treatment modalities within its evidence review. This reflects increasing complexity in decision making around surgical intervention, increasingly involving ‘which’, as well as ‘when’ or ‘whether’ surgery should be offered.  The recommendation proposed here reflects the full breadth of comparative studies between surgical intervention and conservative management, as well as between different modalities of surgical intervention forming the  basis of NICE CG97. |
| **References** |
| 1. NICE clinical guideline 97. Lower urinary tract symptoms in men: management: https://www.nice.org.uk/guidance/cg97.  2. NICE guidance UroLift for treating lower urinary tract symptoms of benign prostatic hyperplasia (Medical technologies guidance MTG 26): https://www.nice.org.uk/guidance/mtg26/.  3. European Association of Urology guideline on the management of non-neurogenic male LUTS: https://uroweb.org/wp-content/uploads/EAUGuidelines-on-the-Management-of-Non-neurogenic-Male-LUTS-2018-largetext.pdf.  4. GIRFT Urology Report: https://www.gettingitrightfirsttime.co.uk/surgicalspecialty/urology-surgery/. |