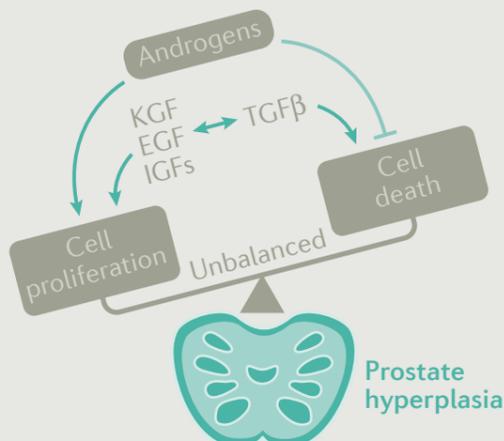


➔ Benign prostatic hyperplasia (BPH) is a common disorder in ageing men in which the prostate gland becomes enlarged. BPH is a major cause of lower urinary tract symptoms (LUTS); the two terms are often conflated.

MECHANISMS

The pathophysiology underlying the development of BPH is complicated and poorly understood, with association studies showing increased risk of BPH in older men, in men with metabolic syndrome (including obesity) and in men with first-degree relatives with the condition. In BPH, the prostatic growth probably occurs as a result of an imbalance between mechanisms that regulate cell death and cell proliferation in prostate epithelial cells and stromal cells. Testosterone diffuses into the prostate; in the stroma, it is converted to dihydrotestosterone (DHT), which acts in an autocrine manner to promote stromal proliferation. DHT can also diffuse into the adjacent epithelial cells to act in a paracrine manner. Growth factors such as keratinocyte growth factor (KGF), epidermal growth factor (EGF) and insulin-like growth factors (IGFs), which are target genes of the androgen receptor, are probably involved in this disorder, as is transforming growth factor- β (TGF β), which is negatively regulated by androgens.

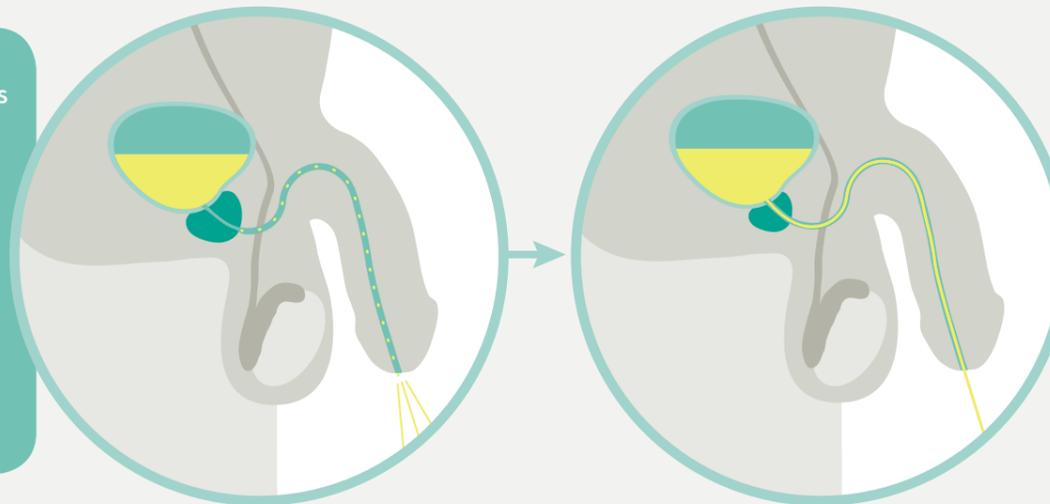


Rx MANAGEMENT

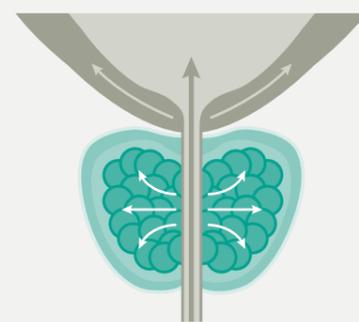
The treatment of men with BPH begins with watchful waiting and progresses to medical and surgical interventions



Medical treatment with α 1-adrenergic antagonists and phosphodiesterase type 5 inhibitors is aimed at relaxing the smooth muscle in the bladder neck, urethra and/or prostate to assist in the passage of urine; steroid 5 α -reductase inhibitors shrink the prostate by blocking DHT synthesis.



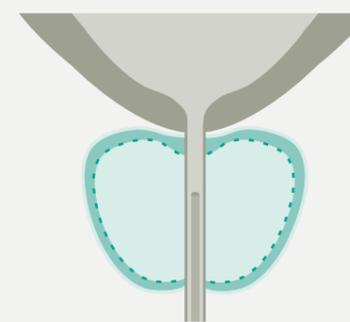
COMPRESSION



DEBULKING



ADENECTOMY



Three types of surgery are available for BPH

EPIDEMIOLOGY

Approximately half of men >50 years of age will have pathological evidence of BPH, rising to >80% of men \geq 70 years of age. Although differences in geographical prevalence for

prostate disease (including BPH) have been documented, the reasons for such differences are poorly understood. Indeed, the differences could be accounted for by genetic factors and/or

environmental differences as men from Southeast Asian countries tend to have smaller prostate volumes than men from western countries.

DIAGNOSIS

The presence of LUTS tends to be the driving force behind a man seeking medical attention. LUTS caused by BPH can be obstructive — resulting in urinary hesitancy, weak stream, straining or prolonged voiding — or irritative — resulting in increased urinary frequency and urgency, nocturia, urge incontinence and reduced voiding volumes. The first step in confirming BPH is a detailed medical history, followed by a physical examination, including a digital rectal examination or transrectal ultrasonography (to assess the shape and consistency of the prostate), and urinalysis. Tests can help to confirm that obstructive symptoms are attributable to BPH and include uroflowmetry (to measure the speed at which the bladder is emptied), pressure–flow studies (to assess the contributions of the bladder and prostate to LUTS) and measurements of the postvoid residual volume (that is, the volume of urine left in the bladder after micturition).

! The higher the level of prostate-specific antigen (PSA), the greater the likelihood of an enlarged prostate. Accordingly, PSA testing can be used in the diagnostic work-up of BPH. However, the test is also used in prostate cancer diagnostics, therefore, the possibility of a need for a prostate biopsy (and its associated risks) should be discussed with the patient.

QUALITY OF LIFE

BPH has a considerable effect on quality of life; in one study, it had a comparable influence on quality of life, as did epilepsy requiring surgery and asthma. The partners of men with BPH have also been shown to be affected, with one report revealing that sleep disturbance, disruption to social life and an increasing psychological burden was evident in female partners of patients.