Chapter 7
Genito-urinary system

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1 Bladder and urinary disorders

1.1 Urinary frequency, enuresis, and incontinence

Urinary incontinence and pelvic organ prolapse in women

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Description of condition

Urinary incontinence is the involuntary leakage of urine and can range in severity and nature. It can impact the person, as well as their families and carers, and can be detrimental to an individual's physical, psychological, and social well-being. Urinary incontinence can be the result of functional abnormalities in the lower urinary tract, or due to other illnesses. It can be sub-classified into four main types: stress, urgency, mixed, and overflow incontinence.

Stress incontinence is the involuntary leakage on effort or exertion, or on sneezing or coughing, and is associated with the loss of pelvic floor support and/or damage to the urethral sphincter.

Urgency incontinence is involuntary leakage which is accompanied, or immediately preceded by a sudden compelling desire to pass urine that is difficult to delay. It is often part of a larger symptom complex known as overactive bladder syndrome. This syndrome is defined as urinary urgency, which may or may not be accompanied by urgency incontinence, but is usually associated with increased frequency and nocturia. The symptoms are thought to be caused by involuntary contractions of the detrusor muscle.

Mixed urinary incontinence is involuntary leakage associated with both urgency and stress, however, one type tends to be predominant.

Overflow incontinence is a complication of chronic urinary retention and occurs when a person cannot empty their bladder completely and it becomes over distended. This may result in continuous, or frequent loss of small quantities of urine. For further information, see Urinary retention p. 825.

Other types include continuous urinary incontinence, where there is constant leakage of urine which may be due to the severity of the persons' condition or may be due to an underlying cause, such as a fistula. Incontinence may also be situational, for example during sexual intercourse or when a person is giggling.

The main risk factor for developing any type of incontinence is older age; this is due to the physiological changes that occur with natural aging. Some other risk factors for *stress* incontinence include pregnancy, vaginal delivery, obesity, constipation, family history, smoking, lack of supporting tissue (such as in prolapse or hysterectomy) and use of some drugs such as ACE inhibitors (can cause cough) and alpha-adrenergic blockers (relax the bladder outlet and urethra).

Some conditions can increase detrusor muscle overactivity and therefore worsen *urgency* incontinence. These include conditions that affect the lower urinary tract such as; Urinary-tract infections p. 622, urinary obstruction, or oestrogen deficiency, those affecting the nervous system such as; stroke, dementia, and Parkinson's disease, and systemic conditions such as; diabetes mellitus or hypercalcaemia. Side-effects of some drugs may also increase detrusor muscle overactivity or indirectly contribute to urgency incontinence; these include cholinesterase inhibitors, drugs that cause constipation, and those with anticholinergic effects. Diuretics, alcohol, and caffeine all increase urine production and can cause polyuria, frequency, urgency, and nocturia.

Aims of treatment

Manage urinary incontinence and the symptoms of overactive bladder syndrome.

Non-drug treatment

EvGr Women with urinary incontinence should modify their fluid intake, and if their BMI is 30 kg/m^2 or greater, be advised to lose weight. For those with an overactive bladder, a reduction in caffeine intake should be trialled.

Absorbent products, hand-held urinals and toileting aids should not be used to treat urinary incontinence, unless the person has severe cognitive or mobility impairment that may prevent further treatment. They may be used in some women as a coping strategy whilst awaiting treatment, as an