

|                                                                                                                                                |      |
|------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Offer antimuscarinic drugs for treating nocturia in men who have nocturia associated with overactive bladder.                                  | Weak |
| Offer 5 $\alpha$ -reductase inhibitors for treating nocturia in men who have nocturia associated with LUTS and an enlarged prostate (> 40 mL). | Weak |
| Do not offer phosphodiesterase type 5 inhibitors for the treatment of nocturia.                                                                | Weak |

## 5.6 Management of male urinary incontinence

The aim of the following section is to provide evidence-based recommendations for the management of male UI.

### 5.6.1 Epidemiology and Pathophysiology

Urinary incontinence is defined as an unintentional loss of urine and is reported to have a prevalence of 11% in men aged 60 to 64 years old to 31% in men  $\geq$  85 years and to affect up to 32% of men with LUTS [587-589]. Urinary incontinence can be further classified into three types: SUI, UUI and mixed urinary incontinence (MUI). Overflow UI, post-micturition dribble, nocturnal enuresis, and total incontinence are specific forms of UI that are outside the current scope of this guideline. An overview of the epidemiology and pathophysiology of male UI is given in table 4.

**Table 4: Epidemiology and pathophysiology overview of male UI [589-593].**

| Type                                    | Definition                                                                               | Causes and associated factors                                                                                                                                                                                                                                                                                                                                                     | Pathophysiology                                                                                                                                                                                                                          | Clinical presentation                                                                                                                                                                                                                                                  |
|-----------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stress UI:</b><br>prevalence < 10%   | Urine loss during movement, on effort or in general during increased abdominal pressure. | <ul style="list-style-type: none"> <li>Benign Prostatic Obstruction surgery</li> <li>Neurogenic condition</li> <li>Pelvic surgery</li> <li>Radical prostatectomy</li> <li>Urethral surgery</li> </ul>                                                                                                                                                                             | Sphincter deficiency                                                                                                                                                                                                                     | <p><b>Symptoms:</b> UI during physical activity, exercises, e.g. during coughing, sneezing, no leakage during sleep, no nocturnal enuresis</p> <p><b>Voiding diary/Pad test:</b> with activity</p> <p><b>Cough stress test:</b> leakage can coincide with coughing</p> |
| <b>Urgency UI:</b><br>prevalence 40-80% | Urine loss concomitant or immediately following an urgency episode.                      | <ul style="list-style-type: none"> <li>Ageing process</li> <li>Anorectal dysfunction/GI disorders</li> <li>Behavioural factors (fluid intake and caffeine consumption)</li> <li>BPO</li> <li>Idiopathic</li> <li>Intrinsic bladder diseases (cystitis, fibrosis, interstitial cystitis)</li> <li>Metabolic syndrome [594]</li> <li>Neurogenic conditions</li> <li>UTIs</li> </ul> | <ul style="list-style-type: none"> <li>Detrusor overactivity (neurogenic or not)</li> <li>Urothelial stimulation</li> <li>Increased afferent signalling</li> <li>Others (pelvic organ cross talk, bladder wall ischemia etc.)</li> </ul> | <p><b>Symptoms:</b> usually associated with, increased frequency and nocturia</p> <p><b>Voiding diary:</b> urgency, frequency and nocturia, incontinence</p>                                                                                                           |