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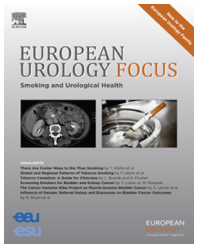

Review – Incontinence

Evaluation and Management of Postprostatectomy Incontinence: A Systematic Review of Current Literature

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Abstract

Context: Radical prostatectomy is the most common reason for male stress urinary incontinence. There is still uncertainty about its diagnostic and therapeutic management.
Objective: To evaluate current evidence regarding the diagnosis and therapy of postprostatectomy incontinence (PPI).
Evidence acquisition: A systematic review of the literature was performed in October 2015 using the Medline database.
Evidence synthesis: Diagnosis and conservative treatment of PPI are currently mostly based on expert opinions. Pelvic floor muscle training is the noninvasive treatment of choice of PPI. For invasive management of moderate to severe PPI, the artificial urinary sphincter is still the treatment of choice, but an increasing number of adjustable and nonadjustable, noncompressive as well as compressive devices are used more frequently. However, no randomized controlled trial has yet investigated the outcome of one specific surgical treatment or compared the outcome of different surgical treatment options.
Conclusions: The level of evidence addressing the surgical management of PPI is still unsatisfactory. Further research is urgently needed.
Patient summary: Incontinence after the removal of the prostate (postprostatectomy incontinence) is the most common cause of male stress urinary incontinence. First-line therapy is physiotherapy and lifestyle changes. If no satisfactory improvement is obtained, various surgical treatment options are available. The most commonly used is the artificial urinary sphincter, but other treatment options like male slings are also available.

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1. Introduction

Radical prostatectomy (RP) is the most common cause of stress urinary incontinence (SUI) in male patients. Postprostatectomy incontinence (PPI) has a major impact on patient's quality of life (QoL) and may affect various daily activities [1]. Recent findings indicate a multicausal pathology including de novo detrusor hypocontractility, intrinsic sphincter deficiency, and decreased membranous urethral length and venous sealing effect [2,3]. Despite notable improvements regarding the pathologic etiology of PPI as well as the surgical technique, reported PPI rates are

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still high and vary between 6% and up to 69% [4]. This variation is mostly due to a missing standardization of definition either of PPI itself or of the severity of the respective incontinence [5], and also because of significant differences in data acquisition [6]. However, there is evidence for certain risk factors that accompany an increased risk of PPI. These risk factors include patient-derived factors such as age and body mass index as well as technical features and experience of the surgeon [4,7–9]. Confronted with an increasing number of patients with PPI, urologists can currently choose from a variety of different conservative as well as invasive treatment options.

We provide current evidence regarding the diagnosis and management of PPI and offer expert opinions regarding the surgical management of PPI.

2. Evidence acquisition

In October 2015, we conducted a literature search in the PubMed/Medline database using the keywords *post-prostatectomy incontinence* (Medical Subject Headings [MeSH]) OR *postprostatectomy incontinence* [MeSH], and an additional PubMed/Medline database search was conducted using the keywords *urinary incontinence* [MeSH] AND *male* [MeSH] AND *artificial urinary sphincter male sling/male adjustable sling/Argus/ArgusT/ATOMS/Pro-ACT/AdVance/AdVanceXP/Remeex/ pelvic floor muscle training/duloxetine* [MeSH], respectively. Our search was restricted to articles published in English in the last 20 yr. The respective reference lists were also screened for relevant articles. Initially, articles were screened and selected based on their abstracts and then studied in detail. All original articles addressing the diagnosis and conservative as well as surgical management of PPI were included. In total, >1200 articles were screened and consequently >100 were systematically reviewed for evidence (Fig. 1).

3. Evidence synthesis

3.1. Diagnosis

To guarantee a sophisticated therapeutic approach, meaningful diagnosis is crucial. However, evidence regarding the diagnosis is currently based on expert opinions. The current European Association of Urology (EAU) guidelines support a two-step assessment of patients seeking help for urinary incontinence [10]. The first step includes a medical history, physical examination, and an objective assessment of symptoms. The medical history can be particularly helpful in specifying the diagnosis of PPI. The ability to disrupt the urine flow, the severity of incontinence over the day (eg, is there worsening in the afternoon/evening?), the presence or absence of nighttime incontinence, and the existence of incontinence-triggering situations (eg, coughing, moving to an upright position, running, sports, in a horizontal position, fatigue) [11].

These expert recommendations highlighting the value of a sophisticated medical history are based on current

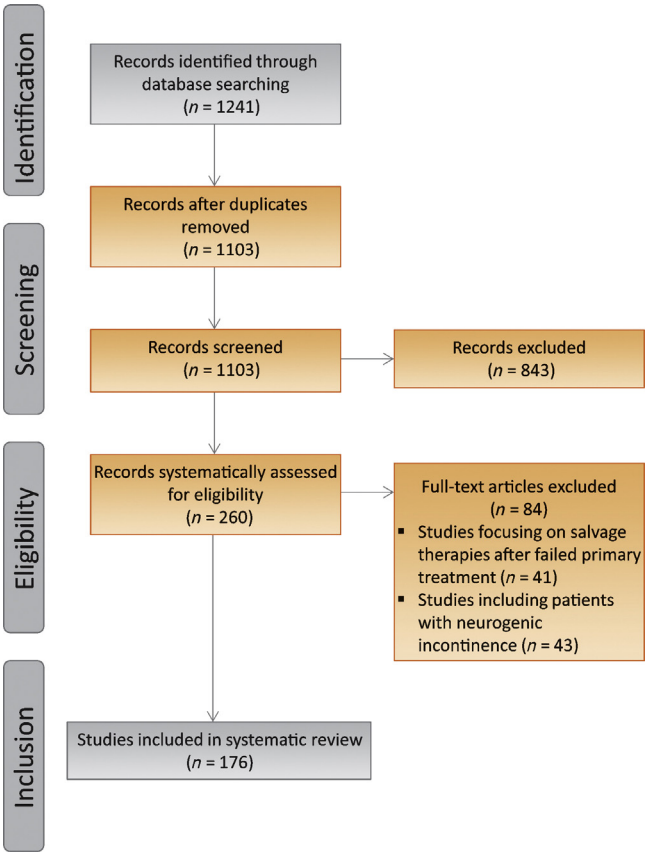

Fig. 1 – Summary of evidence acquisition.

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