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European Association of Urology

Guidelines

EAU Guidelines on Surgical Treatment of Urinary Incontinence

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Abstract

Context: The European Association of Urology (EAU) guidelines on urinary incontinence published in March 2012 have been rewritten based on an independent systematic review carried out by the EAU guidelines panel using a sustainable methodology.
Objective: We present a short version here of the full guidelines on the surgical treatment of patients with urinary incontinence, with the aim of dissemination to a wider audience.
Evidence acquisition: Evidence appraisal included a pragmatic review of existing systematic reviews and independent new literature searches based on Population, Intervention, Comparator, Outcome (PICO) questions. The appraisal of papers was carried out by an international panel of experts, who also collaborated in a series of consensus discussions, to develop concise structured evidence summaries and action-based recommendations using a modified Oxford system.
Evidence summary: The full version of the guidance is available online (www.uroweb.org/guidelines/online-guidelines/). The guidance includes algorithms that refer the reader back to the supporting evidence and have greater accessibility in daily clinical practice. Two original meta-analyses were carried out specifically for these guidelines and are included in this report.
Conclusions: These new guidelines present an up-to-date summary of the available evidence, together with clear clinical algorithms and action-based recommendations based on the best available evidence. Where high-level evidence is lacking, they present a consensus of expert panel opinion.

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1. Introduction

This paper presents a shortened version of the European Association of Urology (EAU) guidelines on urinary incontinence (surgical management). Assessment of patients with urinary incontinence (UI) and nonsurgical management were summarised in a previous paper [1].

Surgical treatment of UI is usually considered only after the failure of conservative therapy or drug treatment. This paper considers the treatment of women with uncomplicated and complicated stress urinary incontinence (SUI), men with SUI, and both men and women with urgency urinary incontinence (UUI) caused by refractory detrusor overactivity (DO). It does not consider patients with UI

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caused by neurologic disease, which is summarised in separate EAU guidelines [2].

The aim is to provide a concise but authoritative summary of the current state of evidence on clinical topics, complete with references to relevant literature together with clear recommendations on what to do or not to do in most clinical circumstances. These recommendations should be particularly helpful in those areas of practice for which there is little or no high-level published evidence. Figure 1 shows algorithms for surgical management of UI in both men and women that are contiguous with those for nonsurgical management [1]. The full-text guidelines do not review the management of fistula, a topic that will be addressed in future editions.

2. Methodology

The guidance was formulated using evidence-based medicine methodology. Every topic was defined as a precise clinical question, expressed in Population, Intervention, Comparator, Outcome (PICO) format [3], which formed the basis of the individual literature search strategies.

Given the size of the task and our limited resources, we used the summarised evidence and identified literature from existing high-quality systematic reviews, evidence-based guidelines, and some extensive narrative reviews as primary sources of evidence up to the cut-off date for each individual review. Then, for each PICO, we performed our own tailor-made searches from the cut-off date of the most recent review forward to our own cut-off date of July 2010. We searched Medline, Embase, and the Cochrane Library and only considered English-language articles. This approach identified 2191 abstracts. The abstracts were then each independently assessed by two panel members, who selected relevant studies, 230 in total.

Each PICO was assigned to a panel member, who extracted the evidence from each selected full-text paper for incorporation into a dedicated database. Further panel discussion on each topic led to the development of summary statements that aimed to synthesise relevant clinical messages using level of evidence (LE) categories standardised by the EAU, leading to phrasing of action-based recommendations, again with strength graded according to EAU standards (see full-text guidelines in the methodological section). These make it clear what the clinician should or should not do in clinical practice and where further evidence is needed.

This guidance is based on the best evidence available to the expert panel up to July 2010, but adherence does not guarantee the best outcomes for individual patients. The need for clinical expertise when making treatment decisions for individual patients is paramount, taking into account the patient's personal values, preferences, and specific circumstances.

Uncomplicated incontinence in women was defined as no history of previous incontinence surgery, no neurologic lower urinary tract symptoms, no bothersome genitourinary prolapse, and not considering further pregnancy. *Complicated* incontinence refers to women where these criteria do not apply.

3. Surgery of uncomplicated stress urinary incontinence in women

3.1. Open colposuspension and autologous fascial sling

Systematic reviews have shown that open colposuspension and autologous fascial sling are similarly effective for the cure of SUI in women in the short term (LE: 1b) [4,5]. The effectiveness of colposuspension deteriorates over 5 yr, and there is a higher rate of genitourinary prolapse than with other operations [4]. Autologous fascial sling has a higher risk of operative complications than open colposuspension, particularly voiding dysfunction and postoperative urinary tract infection (UTI) (LE: 1b).

3.2. Anterior colporrhaphy

Anterior colporrhaphy has lower rates of cure for UI than colposuspension and a higher requirement for reoperation, especially in the longer term (LE: 1a) [6].

3.3. Laparoscopic colposuspension

Laparoscopic colposuspension has similar efficacy to open colposuspension for the cure of SUI and a similar risk of voiding difficulty or de novo urgency (LE: 1a) [7]. Laparoscopic colposuspension has a lower risk of other complications and shorter hospital stay than open colposuspension (LE: 1a).

3.4. Midurethral slings

There has been a rapid adoption of midurethral synthetic sling insertion as the first-line surgical option for SUI because it is effective, it is less invasive, and patients recover more quickly.

3.4.1. Midurethral sling insertion compared with colposuspension

A systematic review compared midurethral slings with both open colposuspension (nine trials) and laparoscopic colposuspension (eight trials) [8]. Retropubic insertion of a synthetic midurethral sling gave equivalent patient-reported and superior clinician-reported cure of SUI compared with colposuspension at 12 mo (LE: 1a); transobturator insertion gave equivalent patient-reported and clinician-reported cure of SUI at 12 mo (LE: 2). Midurethral sling insertion was associated with a lower rate of new symptoms of urgency and voiding dysfunction compared with colposuspension (LE: 1a)

In meta-analysis, the overall patient-reported cure rate at 12 mo was 75%, longer term follow-up for up to 5 yr reported no difference versus colposuspension in effectiveness, although the numbers of participants lost to follow-up was high [9–11]. Voiding dysfunction was less likely for midurethral slings compared with colposuspension (relative risk [RR]: 0.34; 95% confidence interval [CI]: 0.16–0.7).