INTRODUCTION

Urinary incontinence is one of the most distressing issues that adversely affect all aspects of the women's life. It is difficult to precisely determine the incidence and prevalence of urinary incontinence ***(Davila and Gueretter, 2004).***

Urinary incontinence occurs as a result of imbalance between the intravesical pressure and the maximum urethral closure pressure (MUCP). The defect is either a decrease in urethral pressure or an increase in the intravesical pressure. The former is responsible for genuine stress incontinence while the later causes urge incontinence. The term stress incontinence was coined by ***(Sir Eardley Holland in 1928)*** and meant the loss of urine during physical effort ***(Graham and Mallet, 2003).***

The term urinary incontinence may denote a symptom (subjective) or a sign (objective) but not a diagnosis. The term genuine stress incontinence was proposed by the International Continence Society (ICS) in 1976 to mean the condition of involuntary loss of urine when the intravesical pressure exceeds the maximum urethral closure pressure in absence of detrusor contractions**.** Stress urinary incontinence as most recently defined by the ICS is the complaint of involuntary leakage of urine during effort or exertion or during sneezing or coughing. The term stress urinary incontinence also describes the sign, that is, the observation of leakage from the urethra, synchronous with coughing or exertion. When stress incontinence is confirmed during urodynamic testing by identifying leakage from the urethra coincident with increased abdominal pressure, but in the absence of a bladder contraction ***(Abrams et al.,2002).***

Urodynamic stress incontinence is the commonest cause of incontinence in women. It is difficult to assess the true incidence, as many women suffer in silence and consider it an inevitable consequence of child birth and ageing. However, conservatives estimate that one in ten women will suffer from stress urinary incontinence at some point in their lives ***(Rufford, 2004).***

Urinary incontinence is a distressing condition which although rarely life- threatening adversely affects all aspects of a woman's quality of life. through ignorance, embarrassment and a belief that loss of bladder control is "normal" result of child birth and ageing many women suffer for years before seeking help ***(Norton et al., 1998).***

Urine incontinence is a highly prevalent condition among women, occasionally affecting 50-70% of women over the age of 45. Stress incontinence is most common with the comparatively younger groups; among older women, a larger proportion tends to suffer from urge incontinence. As a rule, patients suffering from stress urinary incontinence initially receive a conservative treatment. This may consist of behavioral intervention, such as reducing fluid intake, weight loss or giving up smoking, but the cornerstone of the non- surgical treatment is pelvic floor muscle physical therapy ***(Karantanis et al.,2004).***

Urgency and urinary urge incontinence are troublesome and complex symptoms that can complicate the diagnosis and treatment of stress urinary incontinence, despite this fact, first- line intervention frequently is directed towards the incompetent bladder neck using surgical approaches. Persistent urgency or detrusor instability following anti incontinence surgery reduces patients satisfaction and overall continence in most series ***(Paraiso et al.,2004).***

Urinary incontinence affects a large proportion of adult women and is associated with considerable distress and social disability. In February 2003 the UK National institute for Clinical Excellence (NICE) published new clinical guidelines on the use of tension free vaginal tape (TVT) for surgical treatment of stress urinary incontinence ***(Oelke et al.,2005).***

Effective treatment requires a proper diagnosis of the condition. The choice of treatment is limited to physiotherapy and procedural interventions. Pelvic- floor training consisting of repetitive contraction of the levator muscles (usually referred to as Kegal exercises) is the cornerstone of physiotherapy and may be taught by a physician or nurse. Specialized practitioners offer more intensive instruction and biofeedback. Short term improvements in most women with stress urinary incontinence have been reported, and longer- term success appears to be related to continuing the pelvic- floor training program ***(Neumann et al., 2005).***

Pharmacologic therapy with the serotonin nor epinephrine reuptake inhibitor Duloxetine has been investigated. This drug is believed to enhance pudendal nerve stimulation of the pelvic floor. It has been shown to alleviate symptoms of stress urinary incontinence in several randomized controlled studies, and its effects appear to be synergistic with pelvic floor training. However, because women using duloxetine had a 2- fold increase in suicide risk compared with the general population- an effect not seen in its use for treatment of depression the US food and Drug Administration denied approval of the drug for the treatment of stress urinary incontinence ***(Ghoniem et al.,2005) .***

Injection of a bulking agent into the submucosal or periurethral tissues or both is effective and minimally invasive. In a recent review of

the history and current state of injection therapy, ***Chapple and Colleagues*** concluded that therapy with currently available agents is safe and effective, regardless of urethral mobility or urodynamic assessments of urethral function, and therefore may be considered as a first – line treatment for uncomplicated stress incontinence. There are no data indicating the superiority of any particular agent, although collagen must be regarded as temporary because the substance degrades over time. Injection therapy is not as effective as surgery, whether measured in terms of objective cure or improved quality of life; however, it presents fewer risks to the patient ***(Corcos et al.,2005).***

Surgery for stress urinary incontinence can be broadly categorized into retropubic operations, bladder neck slings and tension- free, midurethral slings. Although the first 2 categories have been practiced for decades, retropubic midurethral slings were introduced in 1998 ***(Ulmsten et al., 1998).*** Their wide applicability and technical simplicity have led to their widespread use, and they have become the preferred surgical treatment of stress incontinence by most surgeons ***(Jha et al., 2005)***. Traditional retropubic operations (e.g., Burch colposuspension or Marshall–Marchetti-Krantz anterior cystourethropexy) and bladder– neck slings remain the standards to which others are compared, and both have been the subjects of recent Cochrane reviews ***(Bezerra et al., 2005).***

Tension- free, midurethral slings are intended to stabilize the midurethral, based on the integral theory of sphincter function. Therefore, this technique would seem to be most appropriate for patients with urethral hypermobility, since this probably indicates loss of pubourethral support. Two recent reviews of 2-6 year follow- up data found cure rates among patients with midurethral slings to be comparable to those among women with Burch urethropexy and facial bladder–neck slings.

Urodynamic data, such as urethral pressure profiles and leak point pressures, are more likely of value in terms of a prognosis than as firm decision points in the choice of operation ***(Atherton and Stalton 2005)***. The newer transobturator approach to placement of the midurethral sling has been shown to be as effective as the original retropubic placement, and to have fewer complications ***(Fischer et al., 2005).***

The surgical treatment of female stress urinary incontinence (SUI) due to urethral hypermobility changed radically a few years ago when ***Ulmsted and Petros in 1995)*** described a new concept of mid- urethral support without tension. Since that first report, worldwide publications have testified to the interest of this new surgical approach called tension-free vaginal tape (TVT). Follow–up assessments lasting more than 5 years have demonstrated stress incontinence cure rates of more than 80%, causing it to be considered the reference standard technique ***(Bousted, 2002)***.

Various complications have been reported, some minor such as bladder perforations, others potentially serious such as vascular or bowel injuries ***(Kuuva and Nilsson 2002).***

A new surgical approach using the transobturator tape (TOT) has been developed with the aim of maintaining the same position, under the midurethra, and efficacy as TVT while reducing or even eliminating the complications related to penetration of the retropubic space. The original aspect of this new TOT technique, described by ***(Delorme in 2001)***, is placement of the tape between two obturator foramen, creating a hammock that should support the urethra, instead of urethral suspension, as occurs with the TVT.

Since 2001, many surgeons have performed this technique to verify the efficacy and morbidity of the transobturator route ***(Ficher et al., 2005)***. Physical and urodynamic examinations are usually performed to assess the postoperative outcomes. Recently, subjective result, obtained by the compilation of quality- of – life questionnaires, have also been included in the postoperative evaluation ***(Deval et al., 2006).***

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