

# MORE ABOUT... MENOPAUSE

## HORMONAL THERAPY AND URINARY INCONTINENCE — WHAT IS THE EVIDENCE?

**PETER DE JONG**, *FRCOG, FCOG, M Med*  
*Department of Gynaecology,*  
*University of Cape Town and Chris*  
*Barnard Memorial Hospital, Cape Town*

### Oestrogens and continence

Oestrogen-sensitive tissues of the bladder, urethra and pelvic floor all play an important role in the continence mechanism. Oestrogens increase urethral closure pressure and improve abdominal pressure transmission to the proximal urethra. The sensory threshold of the bladder to irritative symptoms may be raised, and over 60 years ago physicians reported the successful use of oestrogens to treat urinary incontinence. Further studies showed impressive subjective improvements of up to 70%, but initial trials took place before the widespread introduction of objective urodynamic studies and included a heterogeneous group of individuals with a number of different pathologies. Lack of objective outcome measures and subjective assessment also limited their interpretation.

### Symptoms and treatment

Bothersome lower urinary tract symptoms affect a huge number of women, representing a significant burden of disease and limitation of quality of life, particularly with ageing. Apart from stress and urge incontinence, the subjective symptoms include urgency, frequency, dysuria and nocturia. During the menopausal transition, autonomic disturbances such as hot flushes, sweating, insomnia and palpitations can be relieved by oestrogen hormonal replacement therapy (HRT). Other symptoms

such as fatigue, irritability, nervousness and depressed mood may be improved. In this way, the quality of life is maintained. Progesterones may potentiate or oppose the action of oestrogens.

### Hormonal therapy and urogenital atrophy

Atrophic changes in the urogenital tract and their symptomatic consequences such as vaginal dryness, dyspareunia and irritative symptoms such as urgency, frequency and nocturia are certainly improved by oestrogen therapy. Many studies have shown that the incidence of urinary tract infections is decreased by HRT. Oestrogen has an important physiological effect on the lower urinary tract and its deficiency is an aetiological factor in the overactive bladder syndrome. However the use of oestrogen alone to treat incontinence is disappointing.

### Oestrogens for stress incontinence (SI)

The role of oestrogens in the treatment of stress incontinence (SI) is controversial. Some trials have given promising results but this may be because they were observational, not randomised, blinded or controlled. A number of different types of oestrogens with varying doses, routes of administration and durations of treatment have been used, and outcomes are more often than not subjective and not objective. Oestrogen alone does not appear to be an effective treatment for SI, but may have a role in combination with other therapies such as pelvic floor exercises. Recent data from the US Nurses Health Study report findings from a cohort of 40 000 women (Grodstein 2004).<sup>1</sup> Those taking HRT were more likely to be incontinent than those not using HRT, and their risk of leakage returned to the level of non-takers after they stopped therapy. These findings were unrelated to the type of hormone used, the route of administration, or duration of usage. However a recent paper from Croatia suggests that

vaginally administered low-dose micronised 17 $\beta$ -oestradiol may significantly reduce urinary incontinence if used over a period of 12 months.<sup>2</sup>

### Oestrogens and urge incontinence

While oestrogen has been used to treat postmenopausal urgency and urge incontinence for years, there are few controlled data confirming its benefit. In 2001 Grady and co-workers<sup>3</sup> determined whether postmenopausal HRT improves the severity of incontinence in a randomised, blinded trial among 2 763 postmenopausal women younger than 80 years. The authors concluded that daily oral oestrogen plus progestin therapy was associated with worsening urinary incontinence in older postmenopausal women, and did not recommend HRT for incontinence. This finding is confirmed by further analysis of data from the Women's Initiative Study.<sup>4</sup>

### What about selective oestrogen receptor modulators (SERMS)?

SERMS are indicated for osteoporosis management, and many women with incontinence potential are changing from HRT to SERMS. Levomefloxifene demonstrates a five-fold increase in incontinence compared with placebo, and a three-fold increase in prolapse symptoms. Raloxifene is a second-generation SERM with oestrogenic effects on bone and lipid metabolism, anti-oestrogenic effects on breast tissue and neutral effects on the endometrium and vaginal epithelium. Waetjen and co-workers<sup>5</sup> studied 1 000 women using raloxifene or placebo for incontinence. They failed to document any effects of raloxifene on continence over 3 years of treatment. Virtually all tissues of the urogenital system have oestrogen receptors, and there is good evidence to expect a potential effect of HRT and SERMS on urogenital atrophy and pelvic organ prolapse. However the

clinical relevance of long-term use of SERMS on prolapse and incontinence needs to be evaluated.<sup>6</sup>

### **Conclusions**

Currently the evidence does not support the use of oestrogen replacement alone in the management of stress incontinence. However topical vaginal oestrogen therapy for urogenital atrophy is considered safe with no discernable adverse events. Oestrogen therapy is certainly efficacious for the management of irritative urinary symptoms, and for decreasing the incidence of urinary tract infections.

*References available on request.*