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Abstract Reproduction Form B-1

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Institution	Royal Hallamshire Hospital, Sheffield, UK
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Title (type in CAPITAL LETTERS)	THE USE OF A TRAINING MODEL AND TRANSURETHRAL ULTRASOUND SCANNING IN THE EVALUATION OF MACROPLASTIQUE® THERAPY FOR STRESS URINARY INCONTINENCE

Aims of Study

We performed transurethral ultrasound scanning (TUUS) in a group of women at least one year after transurethral implantation of Macroplastique for the treatment of stress urinary incontinence (SUI). We also assessed the ultrasound appearances in a training model designed for teaching and practising the technique of transurethral injection therapy.

Methods

A total of 9 women with SUI treated with transurethral implantation of Macroplastique were assessed by structured interview, videocystometry and TUUS at a mean follow up of 15 months (12 - 18). The mean age of patients was 58 years (44 - 84). TUUS was performed using the Brüel & Kjaer 2000 Leopard®. The urethra was anaesthetised and lubricated with aqueous lignocaine gel. The 360° transurethral probe, operating at 7 - 10MHz, imaging to a depth of up to 45mm was introduced via a Karl Storz® resectoscope sheath (24Fr). An in vitro training model employing isolated pigs bladder and urethra (Br. J. Urol., in press), designed for practising the technique of transurethral injection of Macroplastique, was used to compare the immediate TUUS appearances in this model with those seen in the clinical setting.

Results

Of the 9 patients undergoing TUUS, 6 were subjectively greatly improved or objectively cured and 3 had persistent SUI. In all 9 patients TUUS demonstrated hyperechoic areas located periurethrally, consistent with implanted Macroplastique boluses. Good outcomes were associated with implants seen to completely encircle the urethra. Conversely, in the 3 women with persistent SUI, urethral encirclement was incomplete, with large gaps. The images obtained in treated women closely resembled those obtained using the training model following Macroplastique implantation. The cross sectional area of hyperechoic areas measured in the training model correlated with the volume of Macroplastique injected at each site.

Conclusions

TUUS is a potentially valuable imaging technique for the assessment of patients following Macroplastique implantation. The procedure is simple to perform and may give further insight into the mechanism of action of this injectable. TUUS may provide an explanation for treatment failure and in particular allow more precise delivery of injected material if used peri-operatively.

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Abstract Reproduction Form B-2

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Figure 1. Effect of methoxamine and placebo on maximum urethral pressure

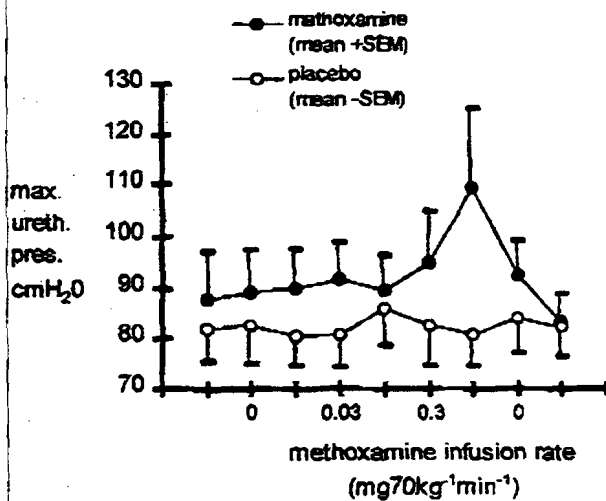


Figure 2. Effect of methoxamine and placebo on pulse rate.

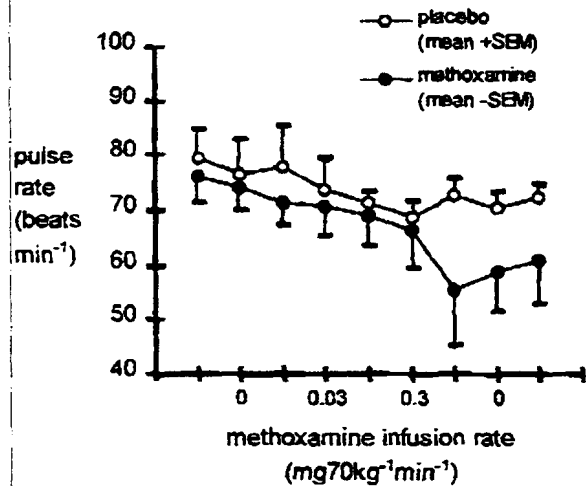


Figure 3. Effect of methoxamine and placebo on systolic blood pressure

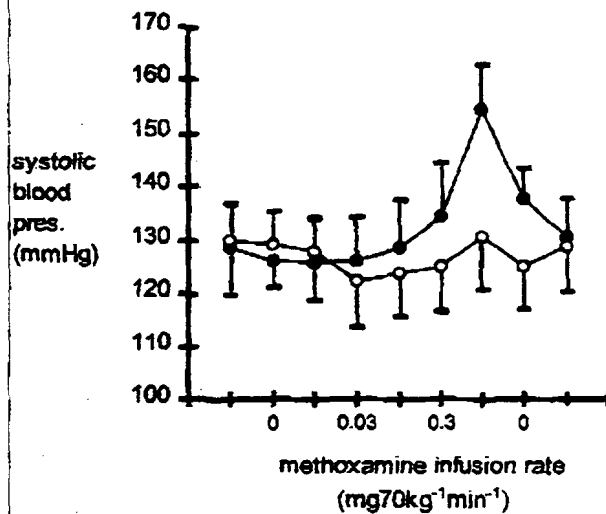


Figure 4. Effect of methoxamine and placebo on diastolic blood pressure.

