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Video Demonstration

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### Abstract Reproduction Form B-1

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Institution	UNIVERSITY OF INNSBRUCK, INNSBRUCK, AUSTRIA
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Title (type in CAPITAL LETTERS)	THREE-DIMENSIONAL TRANSRECTAL ULTRASOUND FOR GUIDANCE OF TRANSURETHRAL INJECTIONS OF MACROPLASTIQUE® IN TREATMENT OF INCONTINENCE

Aims of Study: Numerous publications report on the use of injectables in treatment of urinary incontinence. Postoperative results vary depending on the agent and the technique used. In a pilot study the potential use of three-dimensional transrectal ultrasound for intraoperative control of submucosally applied polydimethylsiloxane elastomer implants as an injection agent was explored.

Methods: In 62 procedures 39 incontinent patients (2 female, 37 male) were treated transurethraally with Macroplastique® implants (solid textured polydimethylsiloxane elastomer implants suspended in a polyvinylpyrrolidone hydrogel). 1 woman suffered from genuine stress incontinence, 1 man from neurogenic stress incontinence; all other patients presented with postoperative stress incontinence after transurethral resection of the prostate, radical prostatectomy or orthotopic bladder reconstruction. Three-dimensional transrectal ultrasound was performed before, during and after the injections to evaluate the exact position of the implants.

Results: Treatment was successful in 28 patients (72%). In 20 of these patients only 1 session was necessary. In 8 patients up to 3 procedures were performed to achieve continence. 2.5 to 10ml were injected per session. The operation failed in cases with large scars or when contractility of the sphincter was absent on three-dimensional ultrasound. The depots presented as hyperechogenic structures. Within 3 months the echogenity of the depots decreased, a process that seems to be due to the resorption of the hydrogel.

Conclusions: Transurethral injection of Macroplastique®, sometimes in a more-step procedure, is a minimally invasive form of treatment of urinary stress incontinence with an acceptable success rate. The correlation between the depots and the rhabdosphincter can be demonstrated very well; especially the coronal plane provides exact information of the position of the depots. Therefore, three-dimensional ultrasound improves the exact deposition of the implants.