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SURGICAL TECHNIQUE

Treatment of stress urinary incontinence after prostatectomy with the adjustable transobturator male system (ATOMS®) with preattached scrotal port☆

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KEYWORDS
Urinary incontinence;
Adjustable transobturator male system (ATOMS®);
Efficacy;
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Abstract

Introduction: Stress urinary incontinence (SUI) is a significant sequela of prostate cancer surgery. In this article, we present the surgical technique and safety and efficacy of the adjustable transobturator male system (ATOMS®) with preattached scrotal port.

Materials and method: An open prospective study was conducted at a university hospital with the main objective of changing the baseline condition after adjustment in the daily pad count and their wet weight (pad test). The secondary objectives were the quality-of-life assessment (International Consultation on Incontinence Questionnaire-Short Form [ICIQ-SF] and Incontinence Impact Questionnaire-7 [IIQ-7], baseline and after the adjustment), patient-perceived results (Patient Global Index [PGI] and Global Response Assessment [GRA] at 1 year) and assessment of complications according to Clavien-Dindo. The numerical values are expressed in median ± IQR.

Results: We analyzed 60 consecutive patients with a follow-up of 21 ± 22 months. The baseline pad-test was 465 ± 450 mL, and the pad-count was 5+3 pads/day. The baseline SUI was mild (11.6% of patients), moderate (25%) and severe (63.3%). The operative time was 60 ± 25 min, the hospital stay was 1 ± 0 days, and the visual analog scale of pain on day 1 after surgery was 0 ± 1. The total filling was 16.5 ± 7 mL, and the number of refillings was 1 ± 2. The pad-test and pad-count after the adjustment were 0 ± 20 mL and 0 ± 1, respectively (both $P < 0.0001$ compared with baseline). SUI disappeared (81.7%) or remained mild (11.7%), moderate (5%) or severe (1.6%). We observed a reduction in the ICIQ-SF ($P < 0.0001$) and IIQ-7 scores ($P = 0.0003$). Both continence ($P = 0.002$) and satisfaction ($P = 0.03$) were lower in the irradiated patients.

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Complications occurred in 11 cases (18.6%), 8 (13.5%) of which were grade I and 3 (5.1%) of which were grade 3. The treatment satisfaction rate was 91.7%, and the patient-perceived overall improvement at 1 year was highly pronounced (PGI-I score, 1±1; GRA, 6±1).
Conclusions: SUI treatment of men using third-generation ATOMS® is safe and effective in the short-term, even in patients with severe SUI. The rate of dry patients after the adjustment exceeded 80%, and the satisfaction rates exceeded 90%. The patients assessed this treatment highly positively.

PALABRAS CLAVE
Incontinencia urinaria;
Sistema transobturador ajustable masculino (ATOMS®);
Eficacia;
Seguridad

Tratamiento de la incontinencia urinaria de esfuerzo tras prostatectomía con el sistema masculino transobturador ajustable (ATOMS®) con puerto escrotal premontado

Resumen
Introducción: La incontinencia urinaria de esfuerzo (IUE) es una secuela importante del tratamiento quirúrgico del cáncer de próstata. Se presenta la técnica quirúrgica y se evalúa efectividad y seguridad del sistema masculino transobturador ajustable (ATOMS®) con puerto escrotal premontado.
Material y método: Estudio abierto prospectivo realizado en un hospital universitario. El objetivo principal fue cambio de situación basal tras ajuste en el recuento diario de compresas (pad-count) y su peso húmedo (pad-test). Los objetivos secundarios fueron evaluación de calidad de vida (ICIQ-SF e IIQ-7 basal y al ajuste), resultados percibidos por el paciente (PGI y GRA al año) y evaluación de complicaciones según Clavien-Dindo. Los valores numéricos se expresan en mediana ± RIC.
Resultados: Se analizan 60 pacientes consecutivos con seguimiento de 21±22meses. El pad-test basal fue 465±450 ml y pad-count 5±3 compresas/día. La IUE basal fue leve (11,6%), moderada (25%) y severa (63,3%). El tiempo operatorio fue 60±25 min, la estancia hospitalaria 1±0 días y la EVA de dolor en día-1 postoperatorio 0±1. El llenado total fue 16,5±7 ml y el número de rellenos 1±2. Pad-test y pad-count tras ajuste fueron 0±20 ml y 0±1, respectivamente (ambos p<0,0001 respecto a basal). La IUE desapareció (81,7%) o se mantuvo leve (11,7%), moderada (5%) y severa (1,6%). Se objetivó reducción en ICIQ-SF (p<0,0001) e IIQ-7 (p=0,0003). Tanto la continencia (p=0,002) como la satisfacción (p=0,03) resultaron peores en pacientes irradiados. Sucedieron complicaciones en 11 casos (18,6%), siendo 8(13,5%) grado I y 3(5,1%) grado III. La tasa de satisfacción con el tratamiento fue 91,7% y la percepción de mejoría global percibida por el paciente al año fue muy marcada (score PGI-I 1±1 y GRA 6±1).
Conclusiones: El tratamiento de la IUE masculina con ATOMS® tercera generación es seguro y eficaz a corto plazo, incluso en pacientes con IUE severa. La tasa de pacientes secos tras el ajuste supera el 80% y la tasa de satisfacción el 90%. Los pacientes valoran muy positivamente este tratamiento.

Introduction

Stress urinary incontinence (SUI) is an important sequel of radical prostatectomy (RP) in the treatment of prostate cancer, which seriously affects the quality of life (QoL) of patients. Its incidence ranges from 6% to 69% and seems to depend more on surgical experience than on the chosen approach.[1,2] The risk factors for SUI include patient age, body mass index, bladder dysfunction, salvage RP after radiotherapy, and advanced stage of prostate cancer. In addition, at least 2% of patients undergoing transurethral resection of the prostate or other surgeries for benign prostatic hyperplasia can also develop SUI.[3]

The artificial urinary sphincter (AUS) has been considered the standard surgical treatment of male SUI and until now it is the gold standard in the treatment of post-prostatectomy incontinence with which the other techniques should be compared.[4] The continence rate after AUS placement ranges between 61 and 100% and the complication rate is high and includes: infection or erosion (8.5%), mechanical failure (6.2%), urethral atrophy (7.9%), and reoperation (26%).[5,6] Male bulbourethral slings that reposition the urethra are also an option in the treatment of mild-moderate SUI, and they are gaining popularity due to the ease of surgery and the low rate of complications. These can be classified according to whether they are adjustable or non-adjustable, or according to the repositioning of the bulbar urethra either through a retropubic or transobturator approach.[7,8] AdVance® achieves subjective healing rates of 8.6–73.7% (average 49.5%) with a follow-up of between 3 months and