

Abstract 381 - Predictors of Adjustment Frequency in ATOMS Device for Male Urinary Incontinence

TUFET I JAUMOT J1, QUINTANA FRANCO L1, GONZÁLEZ LÓPEZ R1, GARDE GARCÍA H1, GONZÁLEZ ENGUITA C1

1. Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain

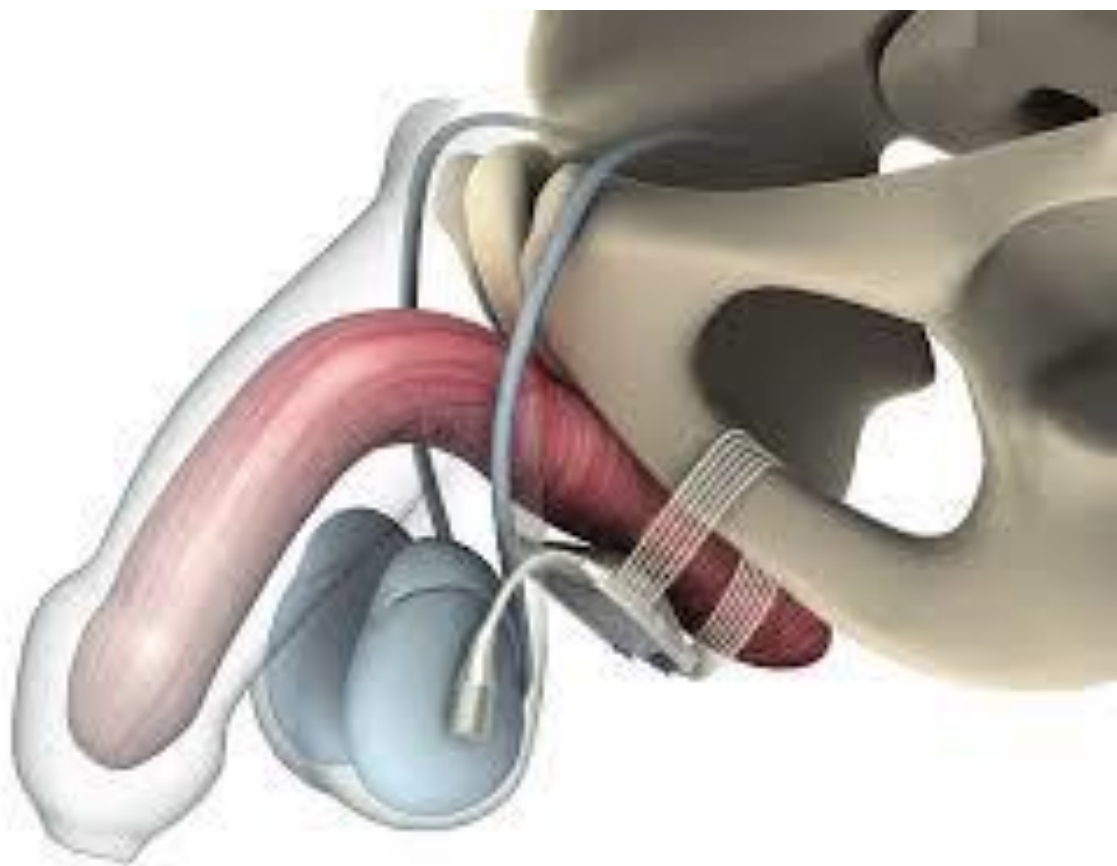


Hypothesis / aims of study

This study investigates the association between preoperative patient variables and the frequency of adjustments required for the ATOMS (*Adjustable Transobturator Male System*)(1) anti-incontinence device in male stress urinary incontinence(2). It is hypothesized that certain preoperative patient characteristics may predict a higher number of adjustments needed. During the intervention, the sphincter cushion is filled via the scrotal port with 10cc of saline solution(3). This leads to the proposition that preoperative strategies, such as increasing the amount of saline solution during the intervention, could help minimize the number of adjustments required subsequently.

Study design, materials and methods

This retrospective study included 114 male patients who underwent placement of the ATOMS device for the treatment of urinary incontinence. Associations between preoperative patient variables (age, BMI, previous radiotherapy, pad weight, among others) and the number of adjustments required were analysed. Pearson's correlation coefficient was calculated for quantitative variables, while qualitative variables were compared using descriptive statistics and Student's t-test or ANOVA. Additionally, linear regression models were constructed with adjustment frequency as the dependent variable.



References

1. Seweryn J, Bauer W, Ponholzer A, Schramek P. Initial experience and results with a new adjustable transobturator male system for the treatment of stress urinary incontinence. J Urol. 2012 Mar;187(3):956-61
2. Radadia KD, Farber NJ, Shinder B, Polotti CF, Milas LJ, Tunuguntla HSGR (2018) Management of postradical prostatectomy urinary incontinence: a review. Urology 113:13–19.
3. González SP, Cansino JR, Portilla MA, Rodríguez SC, Hidalgo L, De la Peña J. First experience with the ATOMS(®) implant, a new treatment option for male urinary incontinence. Cent European J Urol. 2014;67(4):387-91.

Results and interpretation

From a total of 114 patients, data analysis revealed that 25 patients had received radiotherapy while 89 had not. The average age observed was 66 years, with a mean BMI of 27 and a mean pad weight of 542mL. Only previous radiotherapy demonstrated a statistically significant association with adjustment frequency ($p < 0.001$). Patients with a history of radiotherapy required a higher number of adjustments (mean $\pm$ SD: 5.0 ± 2.0) compared to those without radiotherapy (mean $\pm$ SD: 2.7 ± 2.1). Age ($p < 0.638$), BMI ($p < 0.286$), and pad weight ($p < 0.736$) did not show significant associations with adjustment frequency.

Variable	Variable Correlation or Description	P	Coef. (95%CI)
Age	-0.04	0.638	-0.02 (-0.08, 0.05)
BMI	0.11	0.286	0.07 (-0.06, 0.19)
Pad weight	0.03	0.736	0.00 (0.00, 0.00)
Previous radiotherapy			
No	2.7 $\pm$ 2.1		
Yes	5.0 $\pm$ 2.0	<0.001	2.33 (1.43, 3.22)

The findings suggest that previous radiotherapy significantly influences the frequency of adjustments required for the ATOMS device, indicating that patients with a history of radiotherapy will require a greater number of adjustments, leading to increased discomfort as they will need a higher number of injections in the scrotal port. Other patient variables such as age, BMI and pad weight did not emerge as significant predictors of adjustment frequency, highlighting the unique impact of radiotherapy on device performance.

Conclusions

This study emphasizes the importance of considering specific patient factors, especially previous radiotherapy, in the planning of intervention for the placement of the ATOMS device. Identifying patients at higher risk of requiring frequent adjustments can facilitate personalized surgical approaches. Increasing the amount of physiological saline in the sphincter cushion during the intervention could reduce the number of postoperative revisions and thus alleviate patient discomfort. Further research may elucidate additional predictors of adjustment frequency, enhancing the optimization of treatment outcomes in male urinary incontinence management.