Long-Term Durability, Functional Outcomes and Complications among Patients with Artificial Urinary Sphincter AMS 800

Introduction and Objective: The artificial urinary sphincter continues to be one of the most effective and commonly used surgical treatments for severe urinary incontinence. The long-term durability and functional outcome remains unclear. This study sought to report the artificial urinary sphincter complication rates, associated risk factors with complications and long-term quality of life and durability.
Materials and Methods: This single institution study reports the outcomes of 48 cases of artificial urinary sphincter from 2003 to 2011 and their complications (infection, erosion, and mechanical failure). The main reason for the AMS 800 implant was the severe urinary incontinence in male patients after radical prostatectomy.
Results: Among the 48 male patients median follow-up was 3.2 years. The average surgical time was 55 minutes. The overall complication percentage for patients undergoing an artificial urinary sphincter implantation was 33.1%, with mechanical failure the most common cause (14.58%) 7 patients. Others complications: erosion of the urethra 2 patients (4.16%); erosion of the scrotum 4 patients (8.32%); infection 3 patients (6.25%). Removal of an existing artificial urinary sphincter and implantation of a new one was performed in 10 patients (20.83%) (in 2 cases of urethral erosion, in 7 mechanical failures and in 1 case of infection). The reimplantation was done after 6 months from the urethral erosion and the case of the infection. The majority of complications occurred within the first 48 months. The rate of complications was statistical significant higher in patients with diabetes mellitus. Functional outcomes appeared stable in all patients except 7 with similar mild-moderate urinary incontinence severity (0 to 1 daily pad use).
Conclusions: Long-term durability and functional outcomes are achievable for the AMS 800 but there are appreciable complication rates for erosion, mechanical failure and infection in the first 48 months from implantation.