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The Ultimate Minimal-invasive Treatment in High Surgical Risk patients who failed to Wean Off Urethral or Suprapubic Catheters

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Introduction

If surgically unfit patients who fail to wean off urethral or suprapubic catheters, they will be ended up with long-term catheterization. Complications of long-term urethral catheterization includes infection, bleeding, blockage of urethral catheter, traumatic hypospadias, urethral false tract, etc. Long-term suprapubic catheterization seems to be better as no risk of traumatic hypospadias or urethral false tract. Yet, it still has other complications similar to urethral catheterization. Both of these two treatment options greatly affect quality of life of the patients. Moreover, most of them require regular community nursing service for the catheter care which causes a significant burden on our healthcare system.

Objectives

This paper evaluates the feasibility of Memokath prostate stent in treating high surgical risk patients who failed to wean off urethral or suprapubic catheters. It is a thermos-expandable intra-prostatic stent. As it is made of biocompatible nickel-titanium, it is Magnetic Resonance Imaging (MRI) safe. It is indicated in prostatic level urethral obstruction requiring stenting to allow urinary drainage.

Methodology

Due to frequent admissions of patients with complications of long-term catheterization, includes infection, bleeding, blockage of urethral catheter, traumatic hypospadias, urethral false tract, etc. The Prostate Stent Charity Program was introduced in February, 2014. Up to December, 2015, 20 high surgical risk patients with long-term catheterization were included into the program.

Result

The mean age of the patients was more than 80 years old. 85% of cases were ASA3. 95% of cases had at least one or more pulmonary or cardiovascular diseases. 60% of the patients were taking at least one or more anti-platelets/anti-coagulants. All of them did not stop any of these medications before the prostate stents insertion. The mean operation time was 22.2 minutes. 19 prostate stents were inserted ranging from 30mm to 60mm. As one case had short prostate length (20mm), so no prostate stent

was inserted. All of the cases had minimal blood loss (less than 5ml). 17 (89%) patients with prostate stents inserted could self-void immediately after the operation and 16 (84%) patients could be discharged on the same day of the operation. The patients were followed-up (ranged from 1 to 19 months post-op) with uroflowmetry. Currently, 12 patients (63.2%) could self-void with prostate stents in-situ. The average maximum flow rate was 9.6ml/s. The average post-void residual urine was 71.8ml. Two patients (10.5%) were complicated with migrated stents which were completely removed by forceps under cystoscopy using 100ml 5-7 degree Celsius sterile fluid. One patient (5.3%) was complicated with encrustation of the stent which required cystoscopy to remove the stone and stent. The remaining 4 patients (21%) still needed long-term urethral or suprapubic catheterization despite the correct position of the patent prostate stents. Memokath prostate stent insertion is feasible for high surgical risk patients who failed to wean off urethral or suprapubic catheters. It is a safe and reversible procedure. After successful insertion of the prostate stents, patients' quality of life can be improved. At the same time, it can help to reduce their burden on healthcare service and hospital admission due to complications of long-term catheterization.