Objectives

- The permanent nitinol urethral sent Memotherm® (Bard Corp., Covington, GA, USA) has been used in the treatment of detrusor striated-sphincter dyssynergia (DSSD) in neurological patients.

- Our objective was to report the outcomes and complications of the Memotherm® stent implanted in neurological patients with DSSD.

Methods

- All consecutive neurological patients who had a DSSD treated by Memotherm® between November 2005 and November 2011 were included in a retrospective study.

- The following data were collected: demographics, neurological disease, voiding mode, urodynamic parameters, post-void residual volume, and early and late complications.

Results

Table 1. Characteristics of patients implanted

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Median (IQR)</th>
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<tr>
<td>Age (years)</td>
<td>55.4 (35.1-64.5)</td>
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<td>Follow-up (months)</td>
<td>48.3 (18.4-67.8)</td>
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<td>Death at the end of follow-up</td>
<td>15/108 (13.9%)</td>
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- Early postoperative complications occurred in 6 (5.6%) patients (Table 2).
- 86.6% of stents had an epithelial coverage > 75% at the end of follow-up.
- DSSD, post-void residual volume and renal function were significantly improved (Table 2).
- The revision and explantation rates were 25.0% (n=27/108) and 15.7% (n=17/108) respectively (figure 1, Table 3).
- The median time till explantation was 15.0 months (IQR 2.8 - 41.8).

Conclusions

Memotherm® stent is efficient for treating DSSD in neurological patients. Complications exist and required either explantation or revision of the stent. However, the stent has been removed from the market upon the company's decision in some countries, leaving patients without any other prosthetic option except surgical sphincterotomy. The future potential stents may meet at least the same efficacy, with fewer complications.