ABSTRACT

Characteristics of studies cohort

**RESULTS**

**Outcomes of ReMEEX sling system**

**Adjudication number and duration from primary surgery**

**Complications of ReMEEX sling system (Clavien-Dindo grade)**

**CONCLUSIONS**

The ReMEEX system resulted in a success rate of 91% at a mean follow-up of 15.8 months with a low complication rate (13%) in female SUI with recurrence, ISD, or DU.

The ReMEEX system also enabled postoperative re-adjustment of sling tension, as needed, up to 75 months after surgery.

**Disclosures Statement:** none

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**SAFETY AND EFFICACY OF REMEEX SLING SYSTEM FOR FEMALE SUI WITH RECURRENCE, ISD, OR DU AND FEASIBILITY OF RE-ADJUSTMENT**

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**OBJECTIVES**

- To assess the safety and efficacy of implantation of the sub-urethral tension adjustable sling (ReMEEX system) in female SUI with recurrence, ISD, or DU.

**PATIENTS & METHODS**

- **Enrolled population**: 100 female patients who underwent ReMEEX
  
  **Grouping**
  
  **Recurrence**: previous operation for GSI
  
  **ISD**: ALPP <60 cm H2O or MUCP <20 cm H2O
  
  **DU**: Qmax was ≤12 mL/sec and PdetQmax was ≤10 cmH2O during a PFS.

**Adjudication**

**Readjustment**: re-adjusted 3 months following surgery

**Ch-Square Test**: Chi-square test

**p-value**: 0.000

**TABLE 1**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ISD (n=25)</th>
<th>DU (n=32)</th>
<th>Both ISD &amp; DU (n=39)</th>
<th>None (only for recurrence) (n=100)</th>
<th>Total (n=150)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yr), SD</td>
<td>61.9±8.2</td>
<td>62±7.5</td>
<td>60.4±8.2</td>
<td>61.8±7.1</td>
<td>61.8±7.1</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>24.7±2.2</td>
<td>24.3±3.3</td>
<td>24.5±2.7</td>
<td>25.7±3.6</td>
<td>25.1±3.3</td>
</tr>
<tr>
<td>Simultaneous sphincter repair, n (%)</td>
<td>11 (44.0)</td>
<td>9 (28.1)</td>
<td>12 (30.8)</td>
<td>13 (10.3)</td>
<td>45 (45.1)</td>
</tr>
<tr>
<td>Readjustment</td>
<td>20 (80)</td>
<td>11 (34.4)</td>
<td>31 (79.5)</td>
<td>22 (22.0)</td>
<td>66 (44.0)</td>
</tr>
<tr>
<td>CURE, n (%)</td>
<td>20 (80)</td>
<td>10 (31.3)</td>
<td>30 (77.0)</td>
<td>20 (20)</td>
<td>60 (40.0)</td>
</tr>
<tr>
<td>Overall success</td>
<td>20 (80)</td>
<td>10 (31.3)</td>
<td>30 (77.0)</td>
<td>20 (20)</td>
<td>60 (40.0)</td>
</tr>
</tbody>
</table>

**Hypothesis / aims of study**

Determining the optimal balance for incontinence/obstruction is crucial step in setting the proper tension during the mid-urethral sling operation. The re-adjustable mid-urethral sling (ReMEEX system; Neomedic International, Terrassa, Spain) is a device in which sub-urethral tension can be adjusted several months or even years after surgery. However, implantation of the ReMEEX system may increase the amount of foreign bodies and may delay the occurrence of incontinence/obstruction.

**Study design, materials and methods**

The study cohort included 100 female patients who underwent ReMEEX mid-urethral sling operation between Mar. 2008 and Feb. 2012. Patients were evaluated before surgery by physical examination, uroflowmetry & PVR measurement, flexible cystoscopy, urodynamics, 1-hour pad test, and relevant questionnaires. All patients had recurred SUI (previous mid-urethral sling operation), ISD (defined as an ALPP <60 cm H2O or MUCP <20 cm H2O), or DU (defined when Qmax ≤12 mL/sec and PdetQmax ≤10 cmH2O during a PFS). Treatment outcomes were evaluated at a mean follow-up of 15.8 months ± SD.

**Results**

Twenty-five patients (25%) were diagnosed with ISD, 23 (23%) with DU, 39 (39%) with both ISD and DU, and 13 (13%) with recurrent SUI based on the preoperative conditions. At the final follow-up visit, the cure and overall success was defined as ‘cured’ (absence of subjective complaint of leakage and absence of objective leakage or postoperative incontinence) with recurrence, intrinsic sphincter deficiency (ISD), or detrusor underactivity (DU).

**Interpretation of results**

The re-adjustable mid-urethral sling (ReMEEX system; Neomedic International, Terrassa, Spain) is a device in which sub-urethral tension can be adjusted several months or even years after surgery. The ReMEEX system resulted in a success rate of 91% at a mean follow-up of 16 months with few and transient complications in female SUI with recurrence, ISD, or DU. The ReMEEX system enabled postoperative re-adjustment of sling tension as needed during follow-up (up to 75 months after surgery).

**INTRODUCTION**

- Determining the optimal balance for incontinence/obstruction is crucial step in setting the proper tension during the mid-urethral sling operation.
- The re-adjustable mid-urethral sling (ReMEEX system; Neomedic International, Terrassa, Spain) is a device in which sub-urethral tension can be adjusted postoperatively.
- ReMEEX system can be re-adjusted under local anesthesia several months or even years after initial sling surgery. However, implantation of the ReMEEX system may increase the amount of foreign bodies and may increase the possibility of infection.

**OBJECTIVES**

- To assess the safety and efficacy of implantation of the sub-urethral tension adjustable sling (ReMEEX system) in female SUI with recurrence, ISD, or DU.

**PARTICIPANTS & METHODS**

- **Enrolled population**: 100 female patients who underwent ReMEEX
  
  **Grouping**
  
  **Recurrence**: previous operation for GSI
  
  **ISD**: ALPP <60 cm H2O or MUCP <20 cm H2O
  
  **DU**: Qmax was ≤12 mL/sec and PdetQmax was ≤10 cmH2O during a PFS.

**None**: only for recurrence case

**Outcome measures**

- **Success - ‘cure’**: (absence of subjective complaint of leakage and absence of objective leakage on the stress test) or ‘improve’ (rare leakage subjectively, but satisfaction regardless of the stress test)
- **Failure**: all other outcomes and use of any treatment for postoperative incontinence.

Complications by Clavien-Dindo system

**Statistical Analysis**

Comparisons among the groups: One-way analysis of variance with Scheffe’s method for multiple comparisons or Chi-square test depending on the types of variables

The SPSS software package version 19.0 (IBM Corp, Somers, NY, USA) was used, and a two-tailed P value <0.05 was determined to indicate statistical significance.