

## AN ELECTRONIC DECISION TOOL TO SUPPORT THE SELECTION OF PATIENTS WITH OVERACTIVE BLADDER SYNDROME FOR SACRAL NEUROMODULATION

### Hypothesis / aims of study

Sacral neuromodulation (SNM) is an established treatment for patients with idiopathic overactive bladder (OAB) syndrome, insufficiently responding to conservative treatment. Eligibility for implantation is determined during test stimulation, but criteria for the pre-selection of patients for a test procedure are unclear. We conducted an international panel study to establish criteria for SNM consideration in patients with idiopathic OAB. Based on these criteria, we developed an electronic tool to support decision making for SNM in daily practice.

### Study design, materials and methods

The patient population considered in this study was restricted to patients of 16 years and older, with a substantial impact of idiopathic OAB on quality of life, and insufficiently responding to initial treatment. Using the RAND/UCLA Appropriateness Method, a panel of 9 European experts identified 49 clinical conditions relevant to the selection of patients for SNM testing, divided into the following categories:

1. Type of symptoms
2. Previous treatments for OAB
3. Concomitant urinary tract disorders
4. Previous urological/gynaecological surgery
5. Gynaecological conditions
6. Physical co-morbidities
7. Mental state / history of mental problems
8. (History of) sexual problems
9. Current medications

Panellists individually scored the appropriateness of SNM testing for all conditions, distinguishing between inappropriate (absolute contra-indication), appropriate (not limiting SNM consideration), and conditionally appropriate (dependent on the nature of the condition). The panellists also documented the considerations behind their choices. During a plenary meeting, the ratings were discussed and definitions were refined. A second individual rating round was conducted to assess the revised conditions (n=48). Applying the mathematical rules typically used in RAND studies, final appropriateness statements were calculated for each of the conditions. The panel results were embedded in an electronic decision tool that allows the user to select a patient profile and to see the related panel recommendation including the considerations behind.

### Results

Agreement (at least 7/9 panellists having the same score) increased from 49% in round 1 to 92% in the second round. Five conditions (10%) were deemed to be an absolute contra-indication for SNM testing: anatomical low bladder compliance, current urinary tract infection, urinary tumours, pregnancy, progressive neurological disease. Twenty-three conditions (48%) were considered not limiting SNM testing, provided that these are well-controlled (e.g. diabetes mellitus, cardiovascular and pulmonary diseases). For the remaining 20 conditions (42%), the outcome was conditionally appropriate, i.e. dependent on their specific nature.

The electronic decision tool offers the possibility of composing a patient profile based on the conditions considered by the panel (Figure 1, A). Thereafter, the panel recommendation is displayed (Figure 1, B). By clicking on the panel statement, the considerations behind the recommendation are shown (Figure 2). Evaluation of the applicability of the tool in clinical practice is ongoing.

Figure 1

**TIPS** Expert recommendations to support patient selection for InterStim® therapy in patients with Idiopathic Overactive Bladder (OAB) Syndrome

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### PATIENT PROFILE

**Gender**  
 Male  Female

**Symptoms in addition to urgency / UUI**  
 Stress Urinary Incontinence  Polyuria  
 Absence of frequency  Nocturia  
 Faecal incontinence  Chronic constipation

**Previous treatments for OAB**  
 Antimuscarinic agents  Nerve stimulation  
 Botulinum toxin injections  Pelvic floor exercises  
 Augmentation cystoplasty

**Other conditions**  
 Concomitant urinary tract disorders  Gynaecological conditions (Endometriosis)  
 Previous surgery  Current medications  
 Physical co-morbidities (Diabetes mellitus)  (History of) sexual problems  
 Mental state / history of mental problems

NEW PROFILE | SAVE PROFILE | VIEW REGISTRY | PANEL RECOMMENDATION

Current profile:

**CONDITIONALLY APPROPRIATE**

Click here to see the panel considerations

Figure 2

The panel considered SNM to be **CONDITIONALLY APPROPRIATE** in this patient profile for the following reasons:

- **Symptoms in addition to urgency / UUI**
  - **Stress Urinary Incontinence**  
If mixed incontinence is present, the dominant sign / symptom should be treated first. SNM is acceptable if the OAB component overrides the stress urinary incontinence component.
- **Gynaecological conditions**
  - **Endometriosis**  
SNM can be considered if OAB symptoms persist after adequate medical and/or surgical treatment.

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Conditions that do not limit SNM consideration in this patient profile are:

- **Previous treatments for OAB**
  - **Antimuscarinic agents**  
SNM is an appropriate option in patients who did not sufficiently respond to antimuscarinic agents, provided that a proper drug regimen was applied and a sufficiently long response period was considered.
  - **Pelvic floor exercises**  
SNM is an appropriate option in patients who did not sufficiently respond to pelvic floor exercises, provided that the treatment was applied properly and a sufficiently long response period was considered.
- **Physical co-morbidities**
  - **Diabetes mellitus**  
Diabetes mellitus, if well controlled, forms no limitation to SNM consideration.

Interpretation of results

The results of this panel study showed a high extent of agreement about the criteria for SNM consideration in patients with idiopathic OAB. Panel recommendations were embedded in a user-friendly electronic decision support tool to be used in clinical practice and educational settings.

Concluding message

The panel recommendations may support the appropriate selection of patients with idiopathic OAB for the consideration of SNM. Electronic decision support programs could be used to support patient management and to promote best practice.

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<b>What were the subjects in the study?</b>	<b>NONE</b>