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TENSION ADJUSTABLE MESH FOR STRESS INCONTINENCE TREATMENT

Hypothesis / aims of study
Stress incontinence persists in between 5% and 30% of patients treated with non tensed meshes, and between 2% and 40% patients suffer a later obstructive complaint [1,2]. The ability to readjust the tension of the mesh applied in surgery after the operation would make it possible to eliminate both complications [3].

Evaluation of a new mesh for stress incontinence (TVA/TOA) which enables the degree of tension applied during surgery to be readjusted at the post-operative stage.

Study design, materials and methods
Prospective study of 64 SUI patients treated with the TVA mesh and monitored over a 40-month period (DS 12'9, range 12-60). TVA insertion was combined with other procedure in 30 (47%) patients. Cough tests were carried out on patients during the first five days after the operation by filling their bladder with 250cc with saline solution. When leaks were detected, the tension of the mesh was increased. When the patient proved to be continent, a flowmetry was carried out and if obstruction was detected (Q. Max < 10 ml/sc and/or urinary residue >50 ml), the tension of the mesh was reduced. Follow up evaluation was carried out by clinical report, cough test with bladder full of 250 saline solution, flowmetry, urinary residue and quality of life questionnaires.

Results
48 (75%) patients were found to be objectively continent in the immediate post-operative evaluation. In this group, it was necessary to reduce tension in 10 cases (15.6%) due to urinary obstruction. The tension of the mesh was tightened in 16 patients (25%) due to detection of a certain degree of incontinence. All patients were discharged as continent and with no residue. The Q. Max. was 14.9 ml/sc (SD 4.6, range 7-32). There were no bowel, nerve or major vessels injuries and no vaginal or urethral erosion was identified.

In the last follow up revision, 60 patients (93'8%) proved to be continent in the test with full bladder, 2 (3%) showed a notable improvement in their incontinence and 2 (3%) failed. The Q. Max is 22.3 ml/sc (SD 9.1, range 9-50) .Urgency had disappeared or improved in 77 % of the patients who had this prior to operation and had appeared in 5 out of the 34 patients who didn't (14.7%).

The mean severity score for I-QoL was 85.77 (SD19.77, range 26-100) and for ICIQ-SF 4.63 (SD 3.8, range 2-16). Preoperative score was 31.14 (SD 24.33, range 6-86) for I-QoL questionnaire and 16.8 (SD 2.5, range 12-20) for ICQI-SF. In the PGI-I 44 (67'5%) patients were much better and 17 (26%) quite a lot better.

A relation exists between urgency and dismissed quality of life ($p<0.01$).

Interpretation of results
The new mesh (TVA/TOA) is an effective method for treating stress urinary incontinence. Clinically, 93'8% proved to be continent in the cough test with full bladder at 40 months post-op. Significant improvement was shown for all quality of life questionnaires.

Concluding message
TVA (trans-vaginal adjustable) mesh enables surgeons to adjust the tension originally applied during surgery at the post-operative stage, thus eliminating the obstructive dysfunction and improving the rate of continence.

References
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2. Eur Urol (2007) 51;782-787.

3. Actas Urol Esp (2006) 30; 186-194.

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HUMAN SUBJECTS: This study was approved by the San Juan Hospital Clinical Research Ethic Commitee and followed the Declaration of Helsinki Informed consent was obtained from the patients.