CLINICAL SCORE PREDICTIVE OF THE ABDOMINAL LEAK POINT PRESSURE (ALPP) <60 CM H2O IN WOMEN WITH STRESS URINARY INCONTINENCE.

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• Introduction

The presence of Intrinsic sphincter deficiency in patients with IOE is of utmost importance at the time of making decisions because it can change surgical results.
This evidence has led to the physician to find objective parameters to quantify the urethral function, and because of the controversies in the definition of DEI, uses urodynamics based on ALPP and MUCP in order to get to a diagnosis. However, two recent studies have demonstrated non-inferiority in surgical outcomes of sling from mid-urethra in patients with and without previous urodynamic study.
Nevertheless there is little information on the clinical factors that may be associated with DEI, the recognition of those could be of importance in order to create predictive models and in this way improve the selection of patients at the time to deciding a surgical treatment.

• Objectives

To perform a score predictive of ALPP < 60 cm H2O from clinical factors in women with stress urinary incontinence (SUI).

• Material and methods

We performed a descriptive and observational study of women referred for urodynamic study for stress urinary incontinence. The patients were divided into three groups: ALPP: >90 cm H2O, between 60 and 90 cm H2O and < 60 cm H2O. The univariate analysis was done by Chi square test or t-test for continuous or categorical variables, respectively. The logistic regression study was performed in order to complete clinical predictors of ALPP < 60 cm H2O. The variables that were significant in the multivariate analysis were included in the score. A ROC curve was used to determine the predictive ability of the score.

• Results

158 patients with IOE were studied: 65 had ALPP> 90 cm H2O, 64 between 60-90 cm H2O and 29 <60 cm H2O.

Variable	Alpp>90 (n 65)	Alpp 60-90 (n 64)	Alpp<60 (n 29)	p
Age	**53,05**	**56,8**	**61,4**	**0,003**
> 60 years old	**15 (23,1%)**	**26 (40,6%)**	**16 (55,2%)**	**0,007**
Type of incontinence				0,96
IOE	41 (63,1%)	40 (62,5%)	19 (65,5%)	
IOM	24 (36,9%)	24 (37,5%)	10 (34,5%)	
Menopause	**30 (46,1%)**	**43 (67,2)**	**22 (75,8%)**	**0,008**
Nº of pregancies	2,8	3,45	3,32	0,64
Nº of vaginal deliveries	2,23	2,84	2,28	0,45
Weight of newborn	3348	3568	3629	0,38
Obstetric tear	17 (26,1%)	10 (15,6%)	6 (20,7%)	0,33
Anti-incontinence surgery	**4 (6,15)**	**5 (7,8%)**	**5 (17,2%)**	**0,05**
Hysterectomy	**13 (20%)**	**11 (17,2%)**	**11 (37,9%)**	**0,02**
Stamey Grades				**0,006**
I	11 (16,9%)	7 (10,9%)	2 (6,9%)	
II	48 (73,8%)	49 (76,5%)	16 (55,2%)	
III	**6 (9,2%)**	**8 (12,5%)**	**11 (37,9%)**	
Nº of daily pads	3,2	3,1	4,2	0,11
ISIQ SF score	13,85	13,89	14,24	0,66
IIQ7 score	41,3	46,6	43,8	0,98
Presence of Fixed urethra	**4 (6,1%)**	**1 (1,6)**	**6 (20,7)**	**0,003**
Positive Empty stress test	**26 (40%)**	**32 (50%)**	**22 (75,8%)**	**0,005**
Q max (ml/seg)	24,7	30,2	25,2	0,32

Table 1. Association between clinical variables and groups according to ALPP.

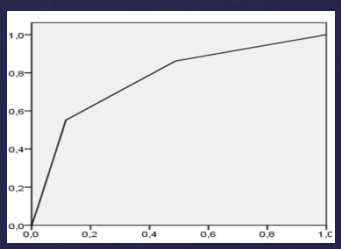
VARIABLE	OR (CI 95%)	p
Age > 60 years old	1,99 (0,13-1,39)	0,16
Menopause	0,09 (0,33-4,57)	0,75
Anti-incontinence surgery	1,72 (0,10-1,57)	0,19
Hysterectomy	0,74 (0,29-2,52)	0,78
Stamey grado III presence	**3,71 (0,11-0,98)**	**0,05**
Fixed urethra	**5,81 (0,03-0,71)**	**0,014**
Positive Empty stress test	**4,89 (0,11-0,84)**	**0,027**

Table 2. Multivariate analysis of independent predictors of ALPP <60 cm H2O.

The predictive score was calculated according to the number of significant variables presented by each patient and was subdivided into score 0 (no present parameter), score 1 (presence of one parameter) and score 2 (presence of 2 or 3 parameters).

Score	ALPP <60 CM H2O	ALPP >60 CM H2O
0 (n: 70)	4 (5,7%)	66 (94,3%)
1 (n: 63)	13 (20,6%)	50 (79,4%)
2 (n: 25)	12 (48%)	13 (52%)

Table 3. Probability of ALPP <60 cm H2O according to predictive score.



Graphic 1. The area under the curve for the score
Predicted value is 0.77.

• Conclusions

In our series of women with IOE, the presence of fixed urethra, a positive empty bladder test, and patients with high IOE symptoms according to Stamey classification, are independent clinical predictors of ALPP <60 cm H2O. The presented score could represent a predictive clinical tool to predict the presence of ALPP <60 cm H2O and in this way contribute in the decision making when choosing a surgical procedure in this group of patients.

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