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Anti-sagging tests and retro-anal levator plate myorraphy : key procedures in perineology ?

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Background

Levator Plate Sagging (LPS) is one of the seven main defects in Perineology and explains the Descending Perineum Syndrome (DPS) (1). It is well-known that DPS is associated with dyschesia and anal incontinence. The aim of this study is to search if this sagging may induce other symptoms besides dyschesia and anal incontinence.

Method

The effect of perineal descent (measured with a Perineocaliper ®) on the frequency of the six main perineological symptoms and the 3 clinical signs of pudendal neuropathy (abnormal sensibility, painful skin rolling test and painful Alcock's canal(2)) was retrospectively studied in 991 cases examined between October 2001 and December 2006.

In the second step of this study, the effect of an isolated retro-anal levator plate myorraphy (RLPM), a surgical procedure dedicated to treat LPS, was retrospectively studied in 9 cases. Indication for surgery was LPS associated with severe symptoms and improved by an "anti-sagging test". These tests are procedures which simulate the supposed effect of a RLPM by reducing manually or with a support the sagging of the levator plate.

Results

<u>1. Impact of perineal descent on the main perineological symptoms and on the 3 clinical signs of pudendal neuropathy</u>

A perineal descent of 2 cm (compared to a 0 cm descent) leads to a significant increase in the frequency of urinary incontinence, faecal incontinence (solid stools), genital prolapse (grade 2 and more) and dyschesia. The same threshold exists for the 3 clinical signs of pudendal neuropathy (820 cases). For dyspareunia the threshold seems to be at 1 cm and in case of dysuria, the difference is significant between 0.5 cm and 2 cm of descent ($p<0.05$).

Frequency of the 6 main perineological symptoms and of the 3 signs of pudendal neuropathy according to the perineal descent measured with a Perineocaliper ®
(p values were obtained using chi-squared tests; comparison with descent = 0)

Perineal descent	Number of cases (n=991)	Urinary incontinence (n=566)	Faecal incontinence (n=41)	Prolapse 2-3 (n=256)	Dysuria (n=93)	Dyschesia (n=261)	Dyspareunia (n=234)	3 signs (n=152/820)
-1	5	80	0	0	40	0	20	0
-0,5	7	42,85	0	42,85	0	14,28	14,28	0
0	227	51,54	1,32	21,58	10,13	24,22	14,53	13,87
0,5	257	50,19 (NS)	3,50 (NS)	20,62 (NS)	6,22 (NS)	15,95 (NS)	17,89 (NS)	17,28 (NS)
1	308	60,06 (p<0.05)	4,54 (P<0.05)	25 (NS)	8,76 (NS)	25,97 (NS	27,59 (P<0.001)	18,41 (NS)
1,5	76	60,52 (NS)	3,94 (NS)	34,21 (P<0.05)	9,21 (NS)	35,52 (NS)	32,89 (P<0.001)	23,33 (NS)
2	82	75,601 P<0.001)	12,19 (P<0.001)	43,90 (P<0.001)	13,41 (NS)	48,78 (P<0.001	36,58 (P<0.001)	27,94 (P<0.01)
2,5	15	66,66	6,66	33,33	20	53,33	46,66	55,55
3	11	81,81	9,09	54,54	27,27	72,72	54,54	44,44
3,5	2	50	0	50	50	50	0	0

2. Effect of retro-anal levator plate myorraphy

Symptoms, Signs	Cured	Improved	Failure	Unknown
S.U.I.	2	0	0	
Frequency	2	0	0	
Nycturia	1	0	0	
Urgency	3	0	2	
Dysuria	2	1	1	
Anal incontinence	2	1	0	
Dyschesia	6	1	1	
Dyspareunia	4	1	1	2 (no sex)
Perineodynia	2	4	1	
Cystocele	3	0	1	
Rectocele	4	0	1	

Before surgery, anti-sagging tests have improved the symptoms in all cases tested (8 dyschesia, 1 urgency and 8 pain on clinical examination).

Conclusions

A perineal descent of 2 cm or more increases the frequency of the 6 main perineal symptoms encountered in perineology and of the three clinical signs of pudendal neuropathy. Anti-sagging tests can be used before surgery to simulate the effect of RLPM. This surgical procedure seems to improve stress urinary incontinence, frequency, nycturia, urgency, dysuria, anal incontinence, dyschesia, dyspareunia, perineodynia, cystocele and rectocele. These results must be confirmed by a larger case series.

References

1. Beco J, Mouchel J: **Perineology: a new area**. *Urogynaecologia International Journal* 2003, **17**(2):79-86.
2. Beco J, Climov D, Bex M: **Pudendal nerve decompression in perineology : a case series**. *BMC Surg* 2004, **4**(1):15.