93

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ONE YEAR CLINICAL AND DYNAMIC MRI RESULTS OF THE NON-TREATED COMPARTMENT AFTER ANTERIOR VAGINAL MESH–REPAIR

Hypothesis / aims of study

After anterior vaginal mesh-repair one could expect a descent of the non-treated vaginal compartments due to factors continuously working on the pelvic floor, e.g. obesity, high intra-abdominal pressure or genetic disposition of weak tissue. The aim of this trial is to evaluate clinical and dynamic magnetic resonance imaging (dMRI) results of the non-treated compartment in patients with pelvic organ prolapse (POP) after anterior mesh repair.

Study design, materials and methods

A retrospective analysis of women with symptomatic pelvic floor descent having been treated with anterior mesh-repair. The prolapse was quantified using the POP-Q system. Patient recruitment was performed at a minimum stage 2 prolapse. Before surgery, 4 and 12 weeks as well as 1 year after surgery the pelvic organ positions were measured on dynamic resonance imaging (1,5T) in relation to the pubococcygeal line (negative parameters lay proximal the puboccocygeal line, positive parameters lay distal the pubococcygeal line). Measured parameters were bladder, uterus / vaginal vault, Pouch of Douglas and rectum at rest and maximal strain. The main focus of evaluation was the behaviour of the non-mesh-treated compartment. All patients gave written informed consent. We used descriptive statistical methods such as boxplots, means and standard deviations to describe the cohort. All analyses were performed with SPSS Statistics Version 19.0.

Results

29 patients (45 – 83 years, mean age 65, 84 +/-10.02) with anterior mesh-repair were evaluated at all four points of time. Figure 1 presents the results of the anterior wall; figure 2 describes the behaviour of the posterior wall. 5 patients received a combined anterior/posterior mesh and were considered as a reference group (see Table 1).

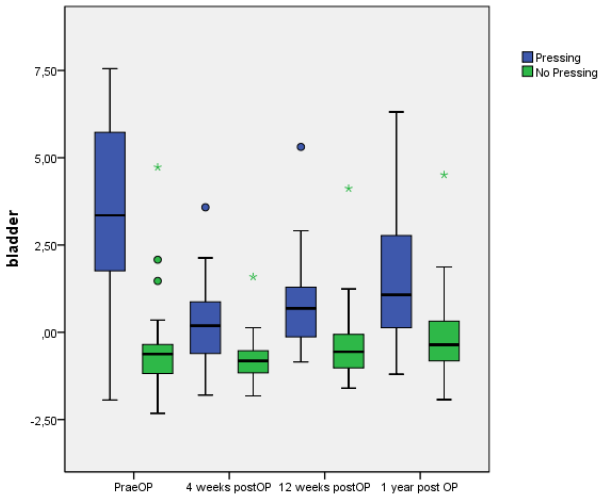

Figure 1: Boxplot of the behaviour of the anterior vaginal wall (treated with mesh) at rest (No Pressing) and at maximal strain (Pressing) at all four examination times.

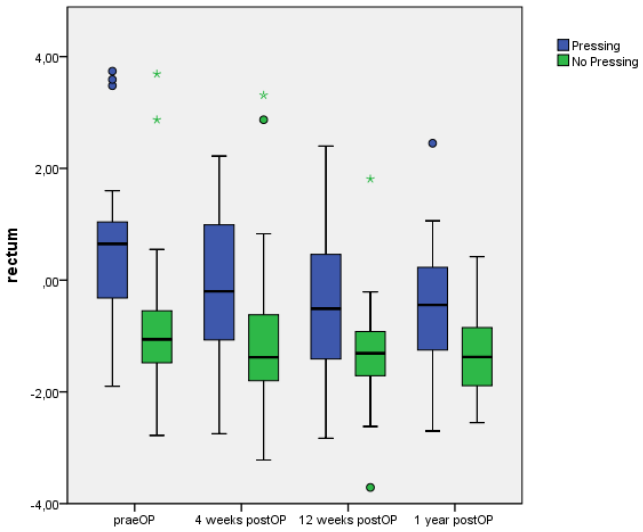

Figure 2: Boxplot of the behaviour of the posterior wall at rest and at maximal strain.

		paeOP	4 weeks postOP	12 weeks postOP	1 year postOP
bladder	pressing	4,39 +/- 2,10	0,00 +/- 1,24	0,66 +/- 0,92	1,14 +/- 0,69
	no pressing	-0,68 +/- 0,32	-1,29 +/- 0,43	-0,83 +/- 0,51	-0,83 +/- 0,55
cervix	pressing	1,31 +/- 2,04	-1,02 +/- 2,20	-1,64 +/- 0,92	-1,80 +/- 0,52
	no pressing	-3,12 +/- 1,14	-3,80 +/- 1,01	-3,05 +/- 0,82	-2,61 +/- 1,03
douglas pouch	pressing	2,63 +/- 2,52	0,35 +/- 1,01	0,13 +/- 1,68	0,39 +/- 0,89
	no pressing	0,02 +/- 2,05	-0,01 +/- 1,54	-0,22 +/- 0,62	-0,41 +/- 1,10
rectum	pressing	1,76 +/- 2,68	0,35 +/- 2,32	0,73 +/- 2,11	-0,13 +/- 0,74
	no pressing	0,27 +/- 1,95	0,22 +/- 1,39	0,18 +/- 1,73	-1,21 +/- 0,58

Table 1: Means and standard deviations of the patients with combined anterior/posterior nesh-repair.

Interpretation of results

One year after anterior mesh repair the rectal wall is surprisingly stable without radiological measurable descent and, if not even, a tendency of improving although not surgically treated. Possibly, a change in pelvic floor behaviour is detectable in later follow-up examinations and with a greater cohort.

Concluding message

The sole treatment of the anterior vaginal mesh presented satisfying results and did not lead to a measurable descent of the non-treated vaginal compartments with dynamic magnetic resonance imaging after one year.

Disclosures

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