

SURGICAL OUTCOME AFTER LAPAROSCOPIC SACROCOLPOPEXY FOR PELVIC ORGAN PROLAPSE EVALUATED WITH DYNAMIC MRI OF THE PELVIC FLOOR

Hypothesis / aims of study

In our clinic laparoscopic sacrocolpopexy (lapSCP) represents the standard procedure for repair of pelvic organ prolapse (POP) combined with stress urinary incontinence (SUI). Dynamic magnetic resonance imaging (MRI) of the pelvic floor is performed pre-/postoperatively to achieve best possible evaluation of surgical results beyond clinical tests.

Study design, materials and methods

Dynamic MRI was carried out in all patients included in the study before and after lapSCP with a 3 Tesla magnet (Achieva, Philips Electronics N. V./The Netherlands, 3 planes T2/sagittal dynamic scans B-FFE).

Extend of POP was assessed on pre- and post-op images with emphasis on urethra/bladder and quantified by measuring orthogonal distances from pubococcygeal line (PCL), distances „base of bladder–PCL“ and „vaginal vault–PCL“ were measured. An experienced pelvic radiologist assessed mobility of urethra, presence of enterocele or rectocele, and visibility of surgical meshes. POP was quantified on visual inspection. Pelvic relaxation was assessed according to the HMO system. All parameters were evaluated at rest as well as at maximal strain respectively. Changes, means and standard deviations were calculated using statistics analysis software.

Results

Post-op dynamic MRI was performed on average 12 weeks after surgery. Dynamic MRI showed improvement/restoration of cystocele and uterus prolapse/descensus in all patients (TABLE1). Base of the bladder was elevated on average by 1,23 cm (range: -0,22 □ 2,68cm; CI=0,95) after surgery during maximal straining. Meshes could be identified in all cases.

Parameters	preoperative	postoperatively improved	postoperatively resolved	postoperatively no change
Urethral hypermobility	8/8 (100%)	2/8 (25%)	1/8 (12,5%)	5/8 (62,5%)
Cystocele	7/8 (87,5%)	4/7 (57%)	3/7(43%)	
Uterine prolaps or descensus	4/8 (50%)	2/4 (50%)	1/4(25%)*	

TABLE 1.

* In the remaining patient hysterectomy was performed for another reason.

Interpretation of results

Concluding message

Dynamic MRI could objectify postoperative changes in POP patients. Anatomy was improved by lapSCP in all patients. Future steps include i) verification of preliminary results in a larger patient series, ii) evaluation of additional parameters and iii) establishing objective POP staging criteria by dynamic MRI.

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** routine procedure with specific workup of the imaging studies, no specific measurements for the investigation **Helsinki:** Yes **Informed Consent:** No