

URINARY, ANAL AND SEXUAL DYSFUNCTIONS AFTER LAPAROSCOPIC VERSUS LAPAROTOMIC RADICAL HYSTERECTOMY

Hypothesis / aims of study: to compare urinary, anal and sexual dysfunctions after laparoscopic (LRH) and laparotomic (ARH) radical hysterectomy for cervical cancer.

Study design, materials and methods: we considered retrospectively patients treated with LRH and ARH and pelvic lymphadenectomy since 2001, including patients submitted to adjuvant pelvic/vaginal radiotherapy. We compared impact of LRH and ARH on postoperative urogynecological symptoms with ICS-standardized questionnaire; on anal symptoms with Wexner-scale; on sexual symptoms with FSFI; on QoL with VAS/Likert-scales. All questions referred to preoperatively condition and 6 months postoperatively.

Results: fifty-four women were included, 27 LRH and 27 ARH. Patient's characteristics were comparable between two groups. In both groups 13 patients had radiotherapy. No conversion from laparoscopy to laparotomy. One bladder and 1 ureteral injuries (7.4%) during LRH and 1 (3.7%) ureteral injury during ARH occurred (p=1.0). Preoperative urogynecological, anal and sexual symptoms resulted comparable in both groups.

Urinary sympt (ICS)	LRH (n=27)			ARH (n=27)		
	PRE	POST	P value	PRE	POST	P value
Storage Symptoms						
Increased day-time frequency	1(4.3%)	3(13%)	0.6	0	1 (3.7%)	1.0
Nocturia	4(17.3%)	6 (26%)	0.72	2 (7.4%)	7 (25.9%)	0.14
Urgency	0	2 (8.6%)	0.49	0	2(7.4%)	0.49
Stress UI	5 (21.7%)	11(47.8%)	0.12	7(25.9%)	12 (44.4%)	0.25
Urge UI	2(8.6%)	7 (30.4%)	0.13	1(3.7%)	8 (29.6%)	0.02
Mixed UI	2(8.6%)	2(8.6%)	1.0	1(3.7%)	2(7.4%)	1.0
Continuous UI	0	0	1.0	0	1(3.7%)	1.0
Enuresis	0	0	1.0	0	2(7.4%)	0.49
Nocturnal enuresis	0	0	1.0	0	2(7.4%)	0.49
Reduced bladder sensation	0	3(13%)	0.23	0	1(3.7%)	1.0
Increased bladder sensation	1(4.3%)	3(13%)	0.6	0	6 (22.2%)	0.02
Absent bladder sensation	0	1(4.3%)	1.0	0	4(14.8%)	0.11
Voiding symptoms						
Slow stream	1(4.3%)	3(13%)	0.6	0	2(7.4%)	0.49
Splitting or spraying	0	1(4.3%)	1.0	0	0	1.0
Intermittent stream	0	3(13%)	0.23	1(3.7%)	3(11.1%)	0.61
Hesitancy	0	1(4.3%)	1.0	0	0	1
Straining	0	8 (34.7%)	0.003	1(3.7%)	8 (29.6%)	0.02
Terminal dribble	0	0	1.0	0	0	1.0
Post micturition symptoms						
Feeling of incomplete emptying	0	1(4.3%)	1.0	0	3(11.1%)	0.23
Postmicturition dribble	1(4.3%)	3(13%)	0.6	0	4 (14.8%)	0.11
Symptoms associated with intercourses						
Urine leakage during penetration	0	0	1.0	0	0	1.0
during intercourse	0	0	1.0	0	0	1.0
during orgasm	0	0	1.0	1(3.7%)	2(7.4%)	1.0
Genital and lower urinary tract pain						
Bladder pain	1(4.3%)	5(21.7%)	0.18	1(3.7%)	3 (11.1%)	0.61
Urethral pain	0	3(13%)	0.23	0	1(3.7%)	1.0
Vulvar pain	0	0	1.0	0	1(3.7%)	1.0
Vaginal pain	2(8.6%)	1(4.3%)	1.0	1(3.7%)	1(3.7%)	1.0
Perineal pain	0	1(4.3%)	1.0	0	0	1.0
Pelvic pain	1(4.3%)	2(8.6%)	1.0	0	2(7.4%)	0.49

AnalSympt (Wexner)	PRE	POST	P value
LRH			
- constipation	0.5 (0-13)	3(0-13)	0.11
- fecal incontinence	0 (0-3)	0(0-3)	0.64

ARH - constipation - fecal incontinence	0 (0-11) 0 (0-2)	2(0-16) 0 (0-3)	0.03 0.54
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Sexual sympt (FSFI)						
	PRE	POST	P value	PRE	POST	P value
Desire	4.2 (1.2-5.4)	4 (1.2-4.2)	0.0007	4.2 (1.2-5.1)	1.8 (1.2-6)	0.016
Arousal	4.5 (0-6)	1.2 (0-5.7)	<0.0001	4.5 (0-6)	1.5 (0-6)	0.0084
Lubrication	5.7 (0.6)	0 (0-6)	0.0002	5.7 (0-6)	1.8(0-6)	0.0020
Orgasm	5.6 (0-6)	0 (0-6)	0.013	5.2 (0-6)	2.4 (0-6)	0.0069
Satisfaction	5.6 (0.8-6)	1.6 (0.8-6)	0.0004	5.6 (0.8-6)	3.6 (0.8-6)	0.0854
Pain	6 (0-6)	0 (0-6)	0.0005	6 (0-6)	2.8 (0-6)	0.0534
Full score	30.5 (2-34.4)	3.2 (2-32.7)	0.0004	29.9 (2-34.4)	16.1 (2-36)	0.0102

Interpretation of results: after LRH none of *storage symptoms* worsened, whereas deterioration of urge incontinence and bladder sensation after ARH occurred (p=0.02). About *voiding symptoms*, either after LRH or ARH straining worsened (p=0.004, p=0.02). No changes were found about *postmicturition symptoms*, *symptoms associated with sexual intercourses* and *genital pain* in both groups. Worsening of constipation after ARH (p=0.03) but not after LRH occurred. Fecal incontinence didn't worsen in both groups. Every sexual domains (desire, arousal, lubrication, orgasm, satisfaction, pain) in both groups significantly worsened, except satisfaction and pain after ARH. Despite urogynecological symptoms influenced QoL, the overall perception of postoperative QoL didn't worsen in both groups.

Concluding message: we conclude for a substantial comparability between two approaches, except for benefit of laparoscopy on urge incontinence, bladder sensation and constipation.

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Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Institutional Review Board
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes