

A LONG-TERM PROSPECTIVE STUDY TO COMPARE THE EFFECTS OF VAGINAL AND ABDOMINAL HYSTERECTOMY ON MICTURITION AND DEFECTION

Hypothesis / aims of study: Hysterectomy has been related to the occurrence of micturition and defecation symptoms.(1;2) This could be explained by damage to the innervation and connective tissue of the organs in the pelvic cavity. The effect of hysterectomy on pelvic floor function may depend on the performed technique. A randomized trial showed that removal of the cervix did not affect pelvic floor function.(3) However, prospective studies comparing vaginal and abdominal hysterectomy are scarce and long-term follow-up studies have never been presented before. In this abstract we report 10 year follow-up data of a prospective study comparing the effects of abdominal and vaginal hysterectomy on pelvic floor function.

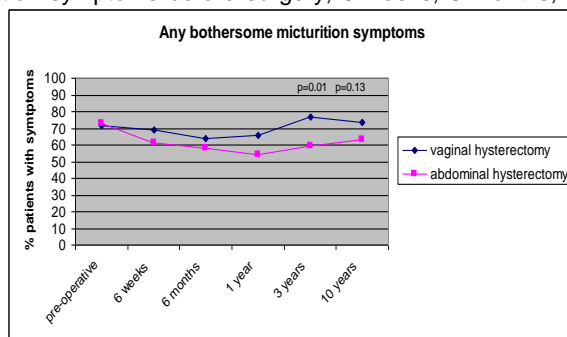
Study design, materials and methods: Prospective multi-centre observational study among 430 women who underwent vaginal or abdominal hysterectomy for benign conditions different from pelvic organ prolapse. The presence and experienced bother of micturition and defecation symptoms were assessed using the urogenital distress inventory (UDI) and defecation distress inventory (DDI) before surgery and at 6 weeks, 6 months, 1 year, 3 years and 10 years after surgery. We also asked women if they were treated for micturition or defecation symptoms since hysterectomy was performed. Statistical significant differences in symptoms between vaginal and abdominal hysterectomy were adjusted for pre-operative differences in possible confounders.

Results: Three years after hysterectomy 77% responded to the questionnaires and ten years after hysterectomy the response rate was 66%. Pre-operative differences were found in parity, uteral descent during surgery, uteral size during ultrasound and indication for hysterectomy. Three years after hysterectomy micturition symptoms were significantly more prevalent in the vaginal hysterectomy group, ten years after hysterectomy this difference was no longer significant. However, ten years after vaginal hysterectomy, significantly more women were treated for micturition symptoms (18% vs 8% p=0.02). After correction for possible confounders the risk of treatment for micturition symptoms is still increased (OR 3.8 95% CI 1.2-11.6). No statistical significant differences were found in prevalence of the individual symptoms. Defecation symptoms also seemed more common after vaginal hysterectomy (p=0.08). Table 1 shows the individual symptoms, an increase was found in the prevalence of flatulence incontinence and fecal incontinence after vaginal hysterectomy. After correction for possible confounders these differences were no longer statistical significant.

Interpretation of results: Although the prevalence of micturition symptoms was similar at 10 years after vaginal and abdominal hysterectomy, vaginally operated patients had an almost 4 times increased risk of treatment for micturition symptoms as compared to abdominally operated patients. Correction for differences in possible confounders between both groups did not alter this observation. An explanation for this increased risk might be traction injury to the innervation and supportive system of the pelvic organs. Also more women seemed to suffer from defecation dysfunction after vaginal hysterectomy compared to abdominal hysterectomy however these differences might be explained by differences in parity, uteral descent, uteral size and indication for hysterectomy.

Concluding message: Patients undergoing vaginal hysterectomy are more likely to experience and seek medical help for micturition symptoms as compared to patients undergoing abdominal hysterectomy. Effects on defecation function of both surgical approaches are similar. The increased risk for micturition symptoms should be mentioned during counselling for hysterectomy.

Figure 1. Proportion of patients with bothersome micturition and defecation symptoms before surgery, 6 weeks, 6 months, 1



year, 3 years and 10 years after surgery.

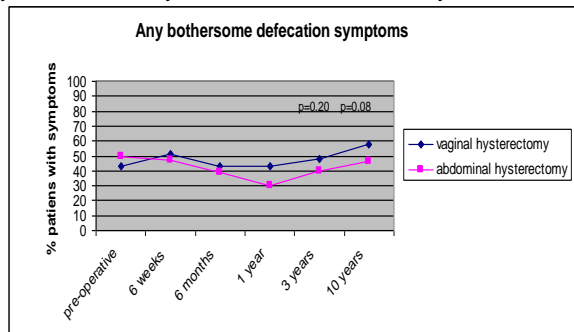


Table 1. Comparison of defecation symptoms, 3 years and 10 years after hysterectomy

3 years after hysterectomy	10 years after hysterectomy

	VH N=86 (%)	AH N=247 (%)	P value	OR VH vs AH OR (95% CI)	VH N=78 (%)	AH N=206 (%)	P value	OR VH vs AH OR (95% CI)
Constipation	6	6	0.95	1.0 (0.3-2.7)	9	5	0.17	2.0 (0.7-5.5)
Obstructive defecation	9	6	0.23	1.7 (0.7-4.3)	7	5	0.55	1.4 (0.5-4.2)
Pain	14	13	0.87	1.1 (0.5-2.2)	12	18	0.22	0.6 (0.3-1.3)
Fecal incontinence	9	7	0.36	1.5 (0.6-3.7)	17	9	0.06	2.1 (1.0-4.4)
Flatulence incontinence	30	28	0.65	1.1 (0.7-1.9)	52	34	0.01	2.1 (1.2-3.6)

VH= vaginal hysterectomy

AH= abdominal hysterectomy

OR= odds ratio

References

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3. Thakar R, Ayers S, Srivastava R, Manyonda I. Removing the cervix at hysterectomy: an unnecessary intervention? Obstet Gynecol 2008;112:1262-9.

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Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	METC UMC
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes