

## SURGICAL CORRECTION OF UTERINE PROLAPSE: CERVICAL AMPUTATION WITH UTEROSACRAL LIGAMENT PPLICATION VERSUS VAGINAL HYSTERECTOMY WITH HIGH UTEROSACRAL LIGAMENT PPLICATION

### Hypothesis / aims of study

Whether or not to preserve the prolapsed uterus is still a matter of debate.(1) More emphasis on the uterosacral ligaments as the most prominent structures to prevent uterine or central compartment descensus has emerged in recent years.(2) Therefore it appeared logical to use techniques which incorporate these ligaments in the restoration of the middle compartment. Cervical amputation is part of the classical Manchester procedure, a surgical procedure for the correction of a prolapsed uterus. In this classical procedure the cardinal ligaments are transposed from its lateral position to an anterior position.(3)

In the last decennium we have modified the Manchester procedure in such a way that more benefit is achieved from the uterosacral ligaments. In the present study, we have evaluated this modified Manchester procedure with uterine preservation and compared it to vaginal hysterectomy with high uterosacral plication with special regard to the middle compartment.

### Study design, materials and methods

The study groups consist of consecutive women who underwent either vaginal hysterectomy with high uterosacral ligament plication or cervical amputation with uterosacral plication in the years 2002-2007. All women underwent preoperative cytology of the cervix and ultrasound screening of the uterus and adnexa to exclude abnormalities. In addition a full gynaecological examination including the POP-Q quantification score during take in and at a postoperative visit one year after the operation in which the POP-Q score was performed. For the compartmental POP-Q stages the points Ba (anterior), C (middle) and Bp (posterior) were used in the study. Patient characteristics and peri-operative complications were collected from the medical files. Procedures were performed or supervised by senior (uro)gynaecologists. The choice for either procedure was left to the surgeon's discretion.

### Results

Between 2002-2007, 156 patients, were included. Ninety-eight patients returned for a one year follow-up. There were no significant differences in baseline characteristics between the two groups e.g. age, parity, bmi and previous surgery. The vast majority of women underwent additional anterior and/or posterior repair. Operating time and intraoperative blood loss were more favourable in the cervical amputation group, hospitalization time however was shorter in the vaginal hysterectomy group (Table1). In the cervical amputation group we found no central compartment recurrence versus two (4%) in the vaginal hysterectomy group. Anterior and posterior compartment prolapse recurrences were similar (Table 2). There was no difference in the pre and postoperative subjective scores.

Table 1 Intra- and postoperative details.

	Cervical amputation n=81	Vaginal hysterectomy n=75	P
<b>Intra operative</b>			
Operation time [minutes]	78 (28)	110 (35)	0.000
Intraoperative bloodloss [ml]	191 (116)	250 (149)	0.006
<b>Postoperative</b>			
Catheterization [days]	3.7 (4)	3.1 (2)	0.198
Length of hospitalisation [days]	6.1 (3)	5.2 (2)	0.018

Data are presented as mean (SD).

P = p value using chi square test or t test as appropriate.

Table 2 The overall and compartmental stages of the pre- and postoperative POP-Q examinations

	Pre-operative		Post-operative 1 year	
	Cervical amputation n=73	Vaginal hysterectomy n=72	Cervical amputation n=50	Vaginal hysterectomy n=48
<b>Anterior POP-Q stage (Ba)</b>				
stage 0	2 (2.7)	0(0)	10 (20.0)	17 (35.4)
stage 1	2 (2.7)	5 (6.9)	17 (34.0)	8 (16.7)
stage 2	27 (37.0)	22 (30.6)	22 (44.0)	23 (47.9)
stage 3	41 (56.2)	44 (61.1)	1 (2.0)	0 (0)
stage 4	1 (1.4)	1 (1.4)	0 (0)	0 (0)
<b>Posterior POP-Q stage (Bp)</b>				
stage 0	8 (11.0)	5 (6.9)	30 (60.0)	33 (68.8)
stage 1	27 (37.0)	14 (19.4)	7 (14.0)	8 (16.7)
stage 2	33 (45.2)	48 (66.7)	13 (26.0)	7 (14.6)
stage 3	4 (5.5)	4 (5.6)	0 (0)	0 (0)
stage 4	1 (1.4)	1 (1.4)	0 (0)	0 (0)

### Vault/cervix POP-Q stage (C)

stage 0	0(0)	0 (0)	23 (46.0)	18 (37.5)
stage 1	43 (58.9)	24 (33.3)	27 (54.0)	28 (58.3)
stage 2	20 (27.4)	15 (20.8)	0 (0)	1 (2.1)
stage 3	9 (12.3)	32 (44.4)	0(0)	1 (2.1)
stage 4	1 (1.4)	1 (1.4)	0 (0)	0 (0)

Data are presented as n (%)

### Interpretation of results

The modified Manchester procedure with uterine preservation and the vaginal hysterectomy with high uterosacral plication performed both excellent with no middle compartment recurrences in the modified Manchester group and only 4% in the hysterectomy group. The low number of central compartment recurrences is in contrast with the high anterior compartment recurrence rate in both groups which was approximately 50%. Most recurrences [60.9%] appeared asymptomatic with regard to prolapse sensations. There were no differences between the two operations with regards to anterior, middle or posterior compartment recurrences.

The operating time was, as expected, shorter for the cervical amputation as was the case for the amount of blood loss. However this might also be a reflection of the more severe prolapse cases in the vaginal hysterectomy group with more stage 3 central compartment prolapse.

To our surprise we found a slightly longer hospital stay for the cervical amputation group for which we have no explanation.

### Concluding message

We found an excellent performance of both procedures with regard to central compartment recurrence. Also no significant difference in functional outcome was found. The modified Manchester is therefore a viable option in women who wish to preserve their uterus.

### References

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<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>All data are part of a registration project which was formally deemed exempt from CME / IRB approval.</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>