

## BILATERAL HIGH UTEROSACRAL LIGAMENT SUSPENSION COMPARED WITH MCCALL CULDOPLASTY FOR VAGINAL VAULT SUPPORT AT VAGINAL HYSTERECTOMY

### Hypothesis / aims of study

To compare both anatomic and functional outcomes of patients undergoing high uterosacral ligament suspension (HUSLS) or McCall culdoplasty at the time of vaginal hysterectomy.

### Study design, materials and methods

We performed a retrospective case-control study comparing patients who underwent HUSLS at the time of vaginal hysterectomy (group I) to a matched control group of patients who underwent vaginal hysterectomy and McCall culdoplasty (group II). The groups were matched in a 2:1 ratio based on age, BMI, and preoperative POP-Q examination (points C, D, and TVL). We excluded patients with prior vaginal vault suspension and with follow-up less than 6 months. Data was analyzed using unpaired t-test, Wilcoxon rank sums, Chi-squared, and Fisher's exact test.

### Results

From July 2007 - July 2009, 47 patients had HUSLS and 121 patients underwent McCall culdoplasty at the time of hysterectomy. 28 patients with HUSLS had sufficient follow-up and were included in the analysis. 56 patients in group II were matched based on the above criteria. Mean age was 56.4 ± 12.7 (group I) and 58.6 ± 8.8 years (group II). Median follow-up was 45 weeks (28-52.7) and 44 weeks (27.3-55.7) respectively. Mean operative time was 159.5 ± 31.5 mins vs 114 ± 26.4 mins (p<0.0001). There was a significant difference in estimated blood loss (257mL vs 156mL; p<0.001), and drop in preoperative to postoperative hematocrit levels (7.4% vs 5.4%; p<0.03).

**Table I: Mean POP-Q measurements**

|     | Preoperative POP-Q |                     |             | Postoperative POP-Q |                     |             |
|-----|--------------------|---------------------|-------------|---------------------|---------------------|-------------|
|     | HUSLS (I)<br>n=28  | McCall (II)<br>n=56 | p-value     | HUSLS (I)<br>n=28   | McCall (II)<br>n=56 | p-value     |
| Aa  | 1.46               | 0.69                | <b>0.04</b> | -2.50               | -2.63               | ns          |
| Ba  | 2.38               | 1.49                | ns          | -2.54               | -2.63               | ns          |
| C   | -0.5               | -0.48               | ns          | -8.46               | -8.05               | ns          |
| Ap  | -0.36              | -0.89               | ns          | -2.89               | -2.63               | ns          |
| Bp  | -0.25              | -0.60               | ns          | -2.86               | -2.64               | ns          |
| D   | -6.30              | -6.67               | ns          | NA                  | NA                  |             |
| Tvl | 9.66               | 9.28                | ns          | 9.18                | 8.54                | <b>0.01</b> |

There were three complications in group I (two ureteral obstructions and one postoperative blood transfusion) and none in group II. Postoperative rates of dyspareunia were not significantly different between groups (17.9% and 19.6% respectively, p=0.76). Overall patient satisfaction (self report of "cured/greatly improved") was 89.3% in group I and 92.9% in group II.

### Interpretation of results

Postoperative TVL was significantly shorter in group II but there was no significant difference in change from preoperative to postoperative TVL (loss of 0.48 cm and 0.88 cm respectively, p=0.08). Vault recurrence was found in 0 patients in group I and 2 patients in group II (p=0.3).

### Concluding message

At time of vaginal hysterectomy, bilateral high uterosacral ligament suspension results in a significantly improved total vaginal length compared to McCall culdoplasty, but at a cost of increased operative time, greater blood loss and perioperative complications.

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| <b>Specify source of funding or grant</b>               | Not applicable                                      |
| <b>Is this a clinical trial?</b>                        | No  |
| <b>What were the subjects in the study?</b>             | HUMAN   |
| <b>Was this study approved by an ethics committee?</b>  | Yes   |
| <b>Specify Name of Ethics Committee</b>                 | Cleveland Clinic Florida Institutional Review Board |
| <b>Was the Declaration of Helsinki followed?</b>        | Yes   |
| <b>Was informed consent obtained from the patients?</b> | Yes   |