

enrollment into this prospective, randomized, open-label, non-inferiority clinical trial. Subjects were randomized to either receive a standard prescription of ten 5 mg tablets oxycodone provided preoperatively (standard) or opioid prescription provided only upon patient request postoperatively (restricted). Preoperatively, all subjects completed baseline demographic and pain surveys including CSI-9, PCS, and Likert pain score. Subjects completed daily surveys for 1 week following surgery to determine average daily pain score, amount of opioids utilized, other forms of pain management, satisfaction with pain control, perception of the amount of opioid prescribed, and need to return to care for pain management. The online Prescription Drug Monitoring Program was utilized to determine opioid filling in the post-operative period. The primary outcome was average postoperative day 1 pain score and *a priori* determined margin of non-inferiority was set at 2.

**RESULTS:** 73 subjects underwent isolated MUS placement and met inclusion criteria; 36 were randomized to the standard group and 37 to the restricted group. With respect to the primary outcome of average post-operative day 1 pain score, the restricted group (mean pain score 3.9 (SD=2.3)) was non-inferior to the standard group (mean pain score 3.7 (SD=2.8)) [difference in means 0.2; 95% CI (-∞, 1.4)]. In the standard group, 21 subjects (58.3%) filled an opioid prescription compared to 6 subjects (16.2%) in the restricted group ( $p<0.001$ ). 15 out of 73 subjects (20.5%) utilized opioids in the 7 day post-operative period, with 9 standard (25.0%) and 6 restricted (16.2%) subjects using opioids ( $p=0.35$ ). Of subjects using opioids, the average number of tablets used was 3.2 (SD=1.6) and only 2 subjects using 5 tablets or more. On a scale of 1="prescribed far more opioid than needed" to 5="prescribed far less opioid than needed", the standard group mean was 1.9 (SD=1.0) compared to a mean of 2.8 (SD=0.9) for the restricted group ( $p<0.001$ ).

**CONCLUSION:** Patients undergoing isolated midurethral sling placement achieve similar pain control and satisfaction regardless of standard or restricted opioid prescribing practice. Subjects prescribed a standard amount of opioid were more likely to obtain opioids and report having more opioids than needed. We infer that conventional opioid prescribing practices may contribute to excess unused opioids in the community.

#### DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIPS:

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## 21 Surgical correction of the genital hiatus at the time of sacrocolpopexy – a 7-year markov analysis

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**OBJECTIVES:** Narrowing the genital hiatus with a posterior repair at the time of sacrocolpopexy may reduce the odds of prolapse recurrence but increases the risk of surgical complications or dyspareunia. Our objective was to perform a cost-effectiveness analysis of concurrent posterior repair performed at the time of laparoscopic hysterectomy with sacrocolpopexy over a 7-year time period.

**MATERIALS AND METHODS:** We used TreeAge Pro® to construct a decision model comparing sacrocolpopexy with and without

concurrent posterior repair (SCP and SCP+PR) over a time horizon of 7 years. A Markov model was embedded in the decision model to simulate prolapse recurrence, prolapse retreatment, and complications including rectal injury, rectovaginal hematoma requiring operative take-back, and postoperative dyspareunia. Costs included index surgery, surgical retreatment and complications. Costs, probabilities, and utilities were gathered from Medicare reimbursement data, published literature, and institutional billings department (Table 1). We modeled effectiveness as quality-adjusted-life years (QALY). Cost-effectiveness was defined as an incremental cost-effectiveness ratio (ICER) calculated as costs / effectiveness and the willingness to pay (WTP) was set at \$100,000/QALY. Sensitivity analyses were performed by varying input variables across a wide range to identify thresholds where our conclusions could change.

**RESULTS:** Our model showed that SCP was the dominant strategy with lower costs (-\$ 9699.02) and higher effectiveness (+0.10) compared to SCP+PR over the 7-year period. Tornado plots showed that the analysis was most influenced by the cost of SCP and cost of SCP+PR. In one-way sensitivity analyses, the model outcome would change only if the cost of SCP was greater than SCP+PR which is not reasonable with the longer operative time and associated surgical complications. In two-way sensitivity analyses, we varied the probability of prolapse recurrence after both strategies. Our conclusions would only change if the probability of recurrence after SCP was 49.5% higher than after SCP+PR. When varying the probabilities of dyspareunia for both strategies, SCP+PR only became the dominant strategy if the probability of dyspareunia for SCP+PR were 9.9% less than the rate associated with SCP alone. None of the scenarios above were reasonable.

**CONCLUSION:** In this 7-year Markov cost-effectiveness analysis, SCP without concurrent PR was the dominant strategy. SCP+PR costs more with lower effectiveness than SCP alone due to higher surgical cost of SCP+PR and higher probability of dyspareunia after SCP+PR.

Table 1. Model probabilities, health utility values and costs

Variable	Probability	Range
Probability of rectal injury after SCP+PR	0.0038	0-0.0095
Probability of hematoma at after SCP+PR	0.0095	0.0095
Probability of dyspareunia after SCP+PR	0.27	0.19-0.36
Probability of dyspareunia after SCP	0.19	0.17-0.19
Probability of prolapse recurrence after SCP+PR	0.058	0.048-0.063
Probability of prolapse recurrence after SCP	0.092	0.068-0.135
Probability of prolapse retreatment after SCP+PR	0.021	0.019-0.024
Probability of prolapse retreatment after SCP	0.048	0.042-0.06
Probability of adherence to vaginal estrogen treatment	0.28	0.20
Health utility value of pelvic organ prolapse	0.83	0.20-1.00
Health utility value of successful pelvic organ prolapse surgery	0.88	0.20-1.00
Health utility value of failed pelvic organ prolapse surgery	0.75	0.20-0.75
Health utility value of a repeat pelvic organ prolapse surgery	0.83	0.20-1.00
Health utility value of dyspareunia	0.83	0.20-0.83
Health utility value of dyspareunia with treatment	0.90	0.20-1.00
Health utility value of rectovaginal hematoma requiring surgical evacuation	0.69	0.20-0.69
Health utility value of a rectal injury requiring surgical repair	0.69	0.20-0.69
Cost of SCP	\$65,138	\$13,027-\$130,276
Cost of SCP+PR	\$74,087	\$13,817-\$138,174
Cost of repeat prolapse surgery	\$50,680	\$10,136-\$101,360
Cost of hematoma	\$37,940	\$7588-\$75,880
Cost of rectal injury	\$12,951	\$1295-\$12,951
Cost of dyspareunia treatment	\$850	\$170-\$1700

SCP = sacrocolpopexy, SCP+PR = sacrocolpopexy with concurrent posterior colporrhaphy

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