

COMPLICATIONS AFTER MINIMALLY INVASIVE SACROCOLPOPEXY WITH AND WITHOUT CONCOMITANT INCONTINENCE SURGERY

Hypothesis / aims of study

Concomitantly performing a prophylactic Burch procedure to treat occult urinary stress incontinence at the time of open sacrocolpopexy for pelvic organ prolapse has been shown to be beneficial (1). This benefit has been extrapolated to concomitant incontinence procedures (such as mid-urethral slings) at the time of minimally invasive sacrocolpopexy (MISCP) despite a lack of evidence regarding the associated risks. Our objective was to compare perioperative 30-day complication rates at the time of MISCPs performed with and without incontinence procedures.

Study design, materials and methods

Patients undergoing MISCP with and without a concomitant incontinence procedure between January 1st 2007 and December 31st 2015 were identified in the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database using relevant Current Procedural Terminology codes. The main outcome of interest was a composite of surgical site infection (superficial, deep incisional or organ/space), bleeding requiring blood transfusion, return to the operating room within 30 days, and surgical stay >48 hours. Secondary outcomes included urinary tract infection, peripheral neurologic injury, wound disruption, sepsis and total operating time. Log-binomial regression modelling was used to identify independent risk factors for the primary outcome and to generate adjusted effect measures for variables of interest.

Results

7,097 women met the inclusion criteria, of which 2,433 (34%) underwent a concomitant incontinence procedure. Patients undergoing a concomitant incontinence procedure were slightly older (59 ± 11 vs. 58 ± 12 , $p < 0.0001$) and had longer total operating time (225 [IQR 170-267] vs. 184 [IQR 120-232] minutes, $p < 0.0001$). A greater proportion of concomitant incontinence procedures were performed by gynecologists compared to urologists (35% vs 28%, $p = 0.002$). Overall rates of complications were low and the primary outcome occurred 227 patients (3%). Urinary tract infection was the most common overall complication occurring in 238 patients (3.34%).

5,070 patients were included in the multivariate analysis using log-binomial regression modelling. After adjusting for baseline patient characteristics and co-morbidities, no association was observed between concomitant incontinence procedure and the composite outcome (adjusted RR 0.99, 95% CI 0.71-1.38) but there was an increased risk of urinary tract infection (adjusted RR 2.28 95% CI 1.69-3.07). Bleeding disorder (aRR 3.83, 95%CI 2.09-7.02, $p < 0.0001$), steroid use for a chronic condition (aRR 2.23, 95% CI 1.23-4.04, $p = 0.01$) were noted to be independent predictors of the primary outcome.

Interpretation of results

Despite being associated with a longer operative time, performing a concomitant incontinence procedure at the time of MISCP was not associated with an increased risk of clinically important surgical complications other than urinary tract infection in this large database study.

Concluding message

Overall rate of 30 day perioperative complications at the time of MISCP are low. Addition of a prophylactic incontinence procedure at the time of MISCP is a reasonable strategy to offer patients. Although urinary tract infection is more common amongst patients having incontinence procedures with MISCP, overall surgical risk does not appear to be significantly increased.

References

1. Brubaker, L et al (2006) The New England journal of medicine 354 (15):1557-1566

Disclosures

Funding: No funding was received **Clinical Trial:** No **Subjects:** NONE