STUDY OBJECTIVE: To compare robot-assisted laparoscopic myomectomy (RALM) with laparoscopic-assisted myomectomy (LAM)

DESIGN: Retrospective cohort study

SETTING: Tertiary care private teaching Hospital

PATIENTS: All patients who underwent myomectomy between June 2012 to December 2014.

INTERVENTION: Patients underwent myomectomy by either RALM or LAM. Large fibroids were morcellated and removed.

MEASUREMENTS & MAIN RESULTS: 76 patients underwent myomectomy in the study period. 40 and 36 women chose RALM and LAM respectively. There were no open myomectomies or conversions. The mean age (33.9y, 32.2y), BMI (24.6, 25.0) and co-morbidities were similar in both groups. Number of women presenting with dysmenorrhea were more in RALM group (9/40 versus 1/36, p=0.03). The average number of fibroids removed at RALM was higher (2.3 versus 1.3, p=0.01) but the average weight of fibroids removed was similar in the two groups (399±679g versus 688±1115g). These differences persisted despite re-analysis after excluding the outliers necessitated by a few extreme values. There was no difference in the mean operating time, blood loss and need for transfusion. Patients in RALM group had significantly lesser requirement of intravenous analgesic (61 hours versus 33 hours) and a shorter hospital stay (1.8 days versus 2.8 days).

CONCLUSION: RALM offers comparable surgical outcomes while reducing intravenous analgesic requirements and hospital stay. The number of fibroids removed at RALM is higher although the overall weight removed is the same, suggesting that this approach might be more useful in patients with multiple fibroids. The operating time is similar (time needed for docking and morcellation was excluded in RALM group). Docking and morcellation time can be reduced as the experience of the surgical team increases. Patients with dysmenorrhea chose RALM more often suggesting that presentation and possibly patient-bother might influence choices. The major limitations are that this study is retrospective, non-random and open label.