

# Robotic versus Laparoscopic Hysterectomy in Morbidly Obese Women with Endometrial Cancer

El-Achi V<sup>1</sup>, Weishaupt J<sup>1</sup>, Carter J<sup>1,2</sup>, Saidi S<sup>1,2</sup>

1. Gynaecology Oncology Department, Chris O'Brien Lifehouse, Sydney, Australia. 2. The University of Sydney

**AIM:** Review and compare the outcomes of morbidly obese patients undergoing laparoscopic hysterectomy or robotic hysterectomy for endometrial cancer or complex atypical hyperplasia.

## BACKGROUND

- Surgery is the mainstay treatment for endometrial cancer and complex atypical endometrial hyperplasia. These conditions are more common in obese women.
- Obese women pose additional risks and challenges to surgery, particularly morbidly obese patients.
- Minimally invasive surgery is preferred over open surgery in obese patients as it reduces surgical morbidity.
- Total laparoscopic hysterectomy (LH) has also been shown to have equivalent survival outcomes to the use of total abdominal hysterectomy.
- More recently, robotic-assisted total hysterectomy (RH) has been used in morbidly obese patients to overcome the limitations of conventional laparoscopy.

## METHOD

- Retrospective analysis of morbidly obese patients ( $BMI \geq 40 \text{ kg/m}^2$ ), who underwent total hysterectomy for endometrial cancer or complex atypical at the Chris O'Brien Lifehouse Gynaecological Oncology Unit from 2015 -2019.
- Patients who had LH were compared to those who had RH. Data was collected from the prospectively maintained gynaecology oncology database and descriptive analysis was performed.

## RESULTS

- 64 patients were identified. 33 (51.6%) underwent a LH and 31 (48.4%) had RH.
- No significant differences in age, indication for surgery, diagnosis, adverse events or haemoglobin change between the two groups.
- There were more LHs performed in 2015-2017 period, and more RHs performed in 2018- 2019 period ( $p=0.01$ ).
- The difference between theatre time use and operating time for LH surgery compared to RH was significantly shorter (45.7 for LH versus 61.9 mins for RH,  $p=0.0088$ ).
- RH patients had a longer length of hospital admission (1.8 days for RH versus 1.2 days for LH,  $p=0.03$ ).
- RH had less estimated blood loss ( $p=0.0005$ ).
- RH was performed more commonly when  $BMI \geq 50 \text{ kg/m}^2$  compared to  $BMI < 50 \text{ kg/m}^2$  ( $p=0.02$ ).

## CONCLUSION

- There has been an increase in the use of RH in morbidly obese patients, noticeably in  $BMI \geq 50$ .
- Robotic-assisted surgery appears to be safe and an effective method of providing minimally invasive surgery in these women.
- Its role in the morbidly obese and super morbidly obese patient requires further investigation.

## REFERENCES

1. Janda M et al. Total laparoscopic versus open surgery for stage 1 endometrial cancer: the LACE randomized controlled trial. *Curr Opin Clin Trials* 2006;27:353-63.
2. Gehrig PA et al. What is the optimal minimally invasive surgical procedure for endometrial cancer staging in the obese and morbidly obese woman? *Gynecol Oncol*. 2008 Oct;111(1):41-5.
3. Stephan J et al. Robotic surgery in supermorbidly obese patients with endometrial cancer. *Am J Obstet Gynecol*. 2015; 213(1):49.e1-49.e8

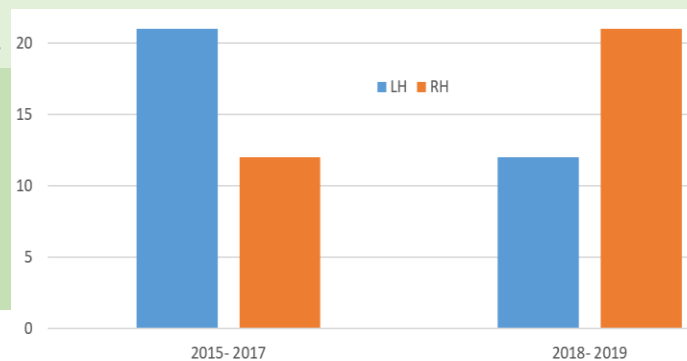


Figure 1: Number of LH versus RH during 2015 – 2017, compared to 2018- 2019

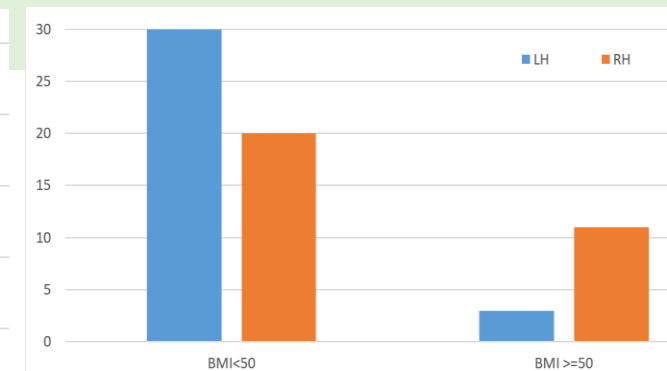


Figure 2: Number of LH versus RH with  $BMI < 50 \text{ kg/m}^2$ , compared to  $BMI \geq 50 \text{ kg/m}^2$