



## LAPAROSCOPIC HYSTERECTOMY IN A MORBIDLY OBESE PATIENT WITH DIABETES UNDER REGIONAL ANAESTHESIA IN A PERIPHERAL HEALTH INSTITUTE.

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**ABSTRACT** Laparoscopic hysterectomy also called as TLH is the latest development in gynaecologic surgeries. Doing laparoscopic surgery in an obese patient presents a challenge both to the surgeon and the anaesthesiologist. In this text I have discussed the management of a morbidly obese patient who presented for TLH at a district hospital.

**KEYWORDS :** Laparoscopic hysterectomy, TLH, morbid obese, spinal anaesthesia after spine surgery.

### INTRODUCTION

Hysterectomy is a commonly performed gynaecological procedure in operation theatre. Laparoscopic hysterectomy is the latest development in gynaecological surgery and has many advantages over abdominal hysterectomy. Our centre is the only government institute in the state of Himachal Pradesh providing the facilities of laparoscopic hysterectomy. So patients from far away places and sometimes with many comorbidities reach our institute for laparoscopic hysterectomy which will be referred to as TLH (TLH= Total Laparoscopic Hysterectomy) in this text. One such patient who was morbidly obese, diabetic and had history of spine surgery visited our centre for TLH. Her management is discussed in the ensuing text.

### Case Report

A 52 year old female patient was admitted in the gynaecology ward of our hospital with chief complaint of polymenorrhoea. She was para three, was diabetic on treatment with insulin since four years. She was morbidly obese with a BMI of 41. She had been operated for traumatic injury of L5 vertebra 10 years back.

In pre anaesthetic evaluation, the findings were as follows:

- Pulse - 96/minute.
- BP - 138/86 mmHg.
- Chest, CVS, CNS - No abnormality.
- Airway - MPS 3, Short neck, no loose teeth or buck teeth. So difficult intubation was anticipated.
- Spine - There was a scar mark extending from L4 to S1 vertebra. L3-L4 space could be felt.
- Weight 105 kg, Height 160 cm, BMI 41kg/m<sup>2</sup>.
- Investigations: Hb- 10g/dL, Fasting blood sugar- 140mg/dL, HBA1C- 7.4, thyroid profile and lipid profile were also done which were within normal limits. ECG showed some signs of left ventricular hypertrophy. All other routine investigations were within normal limits.

As it was a case of difficult airway and also due to obesity, the extubation of this patient could be challenging. So it was decided to perform this case under regional anaesthesia. General anaesthesia was kept as a backup plan in case of failed regional or any untoward complication. The expected surgical time was about 2 hours. All this was also discussed with the patient and an informed consent was taken. The attendants were asked to arrange for two units of blood for the surgery. The patient was advised to omit morning dose of oral hypoglycaemics, the evening dose of long acting insulin was reduced to half on the day before surgery. The patient was advised a fasting period of 8 hours before surgery. Tablet ranitidine 150mg was prescribed to be taken day before surgery. On the day of surgery inj. Ranitidine 50mg, Inj ondansetron 4mg were prescribed 2 hour before the surgery.

On the day of surgery, the patient was shifted to OT and taken as the first case. Morning fasting blood sugar was 130mg/dL and serum electrolytes were within normal limits. Two 18G peripheral intravenous lines were secured. All standard monitors were attached. The patient was then positioned in sitting position. After cleaning and draping the patient under aseptic condition and infiltrating L3-L4 space with local anaesthetic, subarachnoid block was attempted in L3-L4 space using 12cm 26G quinckes spinal needle. We were lucky enough to negotiate the needle into subarachnoid space and free flow of CSF ensued. Inj Bupivacaine heavy 15mg with 25mcg fentanyl

were injected into subarachnoid space. The patient was then kept in modified trendelenburg position at 15 degrees till the sensory level reached T6. Then the patient was kept in supine position. Co-loading with 1 litre of normal saline was done to keep the haemodynamic response to subarachnoid block under check.

The surgery was completed in 90 minutes. The patient was haemodynamically stable throughout the surgery. The sensory effect of subarachnoid blockade lasted for 220 minutes. Once the patient became haemodynamically stable, she was shifted from anaesthesia recovery to gynaecology ward.

### DISCUSSION

TLH is now becoming the procedure of choice for hysterectomy in place of abdominal hysterectomy. It has many advantages over open procedures like early recovery and shorter hospital stay. But TLH in an obese patient in a peripheral institute becomes a big challenge both for the anaesthesiologist and the operating surgeon. In this case we had a morbidly obese patient with diabetes, difficult airway and post spine surgery posted for TLH. Chances of failure of regional anaesthesia are more in post spine surgery patients.<sup>3</sup> But still we decided to proceed with regional anaesthesia in this patient because she also had a difficult airway and advanced airway equipment like video laryngoscope, fibre optic bronchoscope etc are not available in our institute. The nerve supply of uterus is mostly from pelvic splanchnic nerve (S2-S4) and inferior hypogastric plexus (T10-T12) but a sensory level of T6 was achieved to avoid discomfort due to stretching of abdominal organs. Referred pain to shoulder tip due to diaphragmatic irritation by CO<sub>2</sub> Pneumoperitoneum was a concern, but our patient never complained of this. Sometimes steep trendelenburg or lithotomy positions are required during TLH which may adversely affect spontaneous respiration of the patient and also result in patient discomfort, our patient was already counselled for this. Our backup plan in case of failed regional anaesthesia or any untoward complication was general anaesthesia and endotracheal intubation using direct laryngoscopy. In case of failed intubation the backup plan was to use I-gel<sup>®</sup> (a second generation supraglottic airway device). However, the surgery proceeded without any complication and as per plan.

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