

TECHNIQUES AND INSTRUMENTATION

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# A novel approach to minimally invasive hysterectomy without the use of a uterine manipulator: Kamran's TLH technique

Ahmed M. Gendia , Noel E. Donlon and Waseem M. Kamran

## Abstract

**Background:** There are a number of techniques documented in the literature to perform laparoscopic hysterectomy, and here, we propose a safe and novel technique that obviates the need for a pelvic assistant, removes the need for a uterine manipulator and can potentially reduce operative duration.

**Results:** Total laparoscopic hysterectomy can be approached without the use of uterine manipulator or vaginal tubes using the steps demonstrated.

**Conclusions:** This novel technique is safe, efficient and conducive to standardising minimally invasive hysterectomy practices obviating the need for a uterine manipulator and pelvic assistant.

**Keywords:** Kamran's TLH, Uterine manipulator, Hysterectomy, LTAH, Laparoscopic surgery

## Highlights

- This video outlines surgical steps to perform total laparoscopic hysterectomy without the use of uterine manipulator.
- This technique can safely be applied in both malignant and benign hysterectomies.
- It can also help to reduce operation time and the need for pelvic assistant.

## Methods

Surgical steps are as the following:

- 1- The Vagina is loosely packed with a sterile swap wrapped in a sterile glove.
- 2- Traction on the broad ligament is applied, and the infundibulo-pelvic ligament is coagulated and transected. This can be achieved with or without opening the pelvic side wall. Same step is repeated on the opposite side.

- 3- Round ligaments are coagulated and transected bilaterally, then bladder reflection is achieved.
- 4- Bladder peritoneum is held towards the anterior abdominal wall, whilst the surgeon dissects the uterovesical fold in a systematic fashion as demonstrated.
- 5- Uterine vessels are coagulated and cut on each side with further reflection of these vessels.
- 6- Traction on remnant of round ligaments is applied bilaterally to bring the uterus to anterior abdominal wall; this will help the surgeon to dissect the uterosacral ligament.
- 7- Dissection of uterosacral ligament is continued till the line of demarcation between vagina and cervix is evident as highlighted.
- 8- Colpotomy, close to the cervical edge, is performed either anteriorly or posteriorly.
- 9- Specimen is delivered vaginally.
- 10- Closure of the vaginal vault.

## Discussion

Hysterectomy remains one of the most common major surgical interventions in gynaecology. Since the introduction

\* Correspondence: [agandia@live.com](mailto:agandia@live.com)  
Beacon Hospital, Sandyford, Dublin, Ireland

of minimally invasive hysterectomy, several modifications have been adapted. These are laparoscopic-assisted vaginal hysterectomy, laparoscopic-assisted supracervical hysterectomy and total laparoscopic hysterectomy [1]. Total laparoscopic hysterectomy (TLH) has been established as a the procedure of choice among many laparoscopic surgeons, mainly because of the recent advances in minimally invasive technology and the favourable postoperative recovery [2]. Various TLH approaches have been described for both benign and malignant gynaecological diseases. These techniques are dependent on the use of uterine manipulator or vaginal tubes [3]. However, only few reports has described TLH approach without utilising either vaginal or uterine assistant [4, 5]. Kavallaris et al. described a technique of TLH without using any uterine manipulation and reported the safety of his approach, especially in patients with vaginal or cervical stenosis [5]. Also, there was no intra- or postoperative complications in all 67 hysterectomies performed in the that study [5]. Additionally, Kavallaris et al. hypothesised the use of uterine manipulator could increase the risk of spreading tumour cells in early cervical or endometrial cancer. However, a case series by Tinelli et al. compared the outcomes of laparoscopic hysterectomy with and without the use of manipulator in early endometrial cancer concluded that the use of uterine manipulator did not increase the positive peritoneal cytology or early recurrence rate [6]. Our approach demonstrates a safe, efficient and an easy to learn technique to perform TLH without the use of any pelvic manipulator. This approach can help to reduce operative time by eliminating the use of extra assistant to handle uterine manipulator and reducing blood loss by minimise any traumatic movement through vagina or uterus.

## Conclusions

This novel approach is safe, efficient and conducive to standardising minimally invasive hysterectomy practices obviating the need for a uterine manipulator and pelvic assistant. Additionally, Kamran's TLH can help in reducing operative time, cost and the need for additional assistant. Moreover, studies on TLH without uterine manipulation are required to evaluate the impact on the operative time and intra-postoperative complications.

## Supplementary information

Supplementary information accompanies this paper at <https://doi.org/10.1186/s10397-020-01078-z>.

Additional file 1: Video

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## Authors' contributions

AG recorded and edited the video. NED revised the manuscript. WK supervised and revised manuscript/technique developer. All authors read and approved the final manuscript.

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## Availability of data and materials

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## Ethics approval and consent to participate

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## Consent for publication

Consent to participate and publication in recording of the surgical video were obtained from the patient (can be provided if needed).

## Competing interests

There are no conflicts of interests between the authors (forms can be provided if needed).

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