

# Total laparoscopic hysterectomy: A case report from ILE-IFE, Nigeria

Olusegun O. Badejoko, Kayode O. Ajenifuja, Babawale O. Oluborode, Adebajo B. Adeyemi

Department of Obstetrics, Gynecology and Perinatology, Obafemi Awolowo University, Teaching Hospitals Complex, Ile-Ife, Nigeria

## ABSTRACT

Total laparoscopic hysterectomy (TLH) is an advanced gynecological laparoscopic procedure that is widely performed in the developed world. However, its feasibility in resource-poor settings is hampered by obvious lack of equipments and/or skilled personnel. Indeed, TLH has never been reported from any Nigerian hospital. We present a 50-year-old multipara scheduled for hysterectomy on account of pre-malignant disease of the cervix, who had TLH with bilateral salpingo-oophorectomy in the Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, southwestern Nigeria and was discharged home on the first post-operative day. She was seen in the gynecology clinic a week later in stable condition and she was highly pleased with the outcome of her surgery. This case is presented to highlight the attainability of operative gynecological laparoscopy, including advanced procedures like TLH in a resource-constrained setting, through the employment of adequate local adaptation and clever improvisation.

**Key words:** Laparoscopy, endoscopy, hysterectomy, Nigeria

### Address for correspondence:

Dr. Olusegun O. Badejoko,  
Department of Obstetrics and  
Gynecology, Obafemi Awolowo  
University, Ile-Ife, Nigeria.  
E-mail: oobmed@yahoo.com

## INTRODUCTION

Since the first total laparoscopic hysterectomy was performed in 1988 by Harry Reich in Pennsylvania, USA,<sup>1</sup> several TLH series have been published from different countries of the world, but only very few of these reports have come from developing countries.<sup>2-5</sup> In Nigeria, for example, there are fewer than 10 published reports of operative gynecological laparoscopy procedures, the most advanced of which was a laparoscopically-assisted vaginal hysterectomy (LAVH), reported by Ikechebelu *et al.*, in south-eastern Nigeria in 2009.<sup>6,7</sup>

We present this case report of TLH in OAUTHC, Ile-Ife, Nigeria. This, to the best of our knowledge, is the first published report of TLH from Nigeria.

## CASE REPORT

Our patient was a 50-year-old multipara scheduled for hysterectomy on account of pre-malignant disease of the cervix. Her vital signs and routine pre-operative

investigation results were all within normal limits. She, therefore, had TLH + BSO on September 19, 2012.

After routine scrubbing and draping in the Lloyd Davies' position, a uterine manipulator comprising of a Spackman's cannula and a vulsellum was applied. CO<sub>2</sub> pneumoperitoneum was created using the Verre's needle technique. An infra-umbilical 11 mm primary port was inserted, and a 0° 10 mm laparoscope connected to a camera, and light source was introduced. The visualized pelvic and abdominal structures all appeared normal. Four secondary 5 mm ports were then inserted under vision, one in each iliac fossa and two in the supra-pubic region as shown in Figure 1.

Both ureters were identified in their course along the pelvic side-walls. The right infundibulopelvic ligament was desiccated using monopolar Maryland forceps connected to a simple electro-surgical generator and divided with laparoscopic scissors. This alternate desiccation and cutting was carried medially along the broad ligament, to the angle of the uterus, where the right round ligament was desiccated and divided. The right half of the uterovesical peritoneum was then incised using monopolar current delivered through the tip of the laparoscopic scissors. All the foregoing was repeated on the left.

The uterovesical peritoneum was then reflected to displace the bladder caudally, and a laparoscopic myoma screw was applied to the uterine fundus for optimal uterine manipulation. The right uterine vessels were coagulated

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and divided, followed by the right cardinal-uterosacral ligament complex. The same was repeated on the left. The uterine manipulator was then replaced with the plastic container of a 50 ml syringe to serve as a colpotomizer as shown in Figure 2.

Anterior colpotomy was performed using monopolar current delivered through the laparoscopic scissors, and this was carried circumferentially. The improvised colpotomizer was removed, temporarily releasing the pneumoperitoneum. A vulsellum was then introduced *per vaginam*, and an airtight seal was created around it with a gauze-in-glove pack. Pneumoperitoneum was then re-established.

Under laparoscopic vision, the cervix was grasped with the vulsellum, pulling the uterus into the vagina. Vault closure was performed with a No. 2 Vicryl extracorporeal Weston knot on the right cardinal ligament, which was continued as a simple continuous intra-corporeal suture terminating at the left cardinal ligament. The two ends of the suture were tied together, thus approximating the two cardinal

ligaments in the midline. All the ports were subsequently removed under vision, and port site wounds were closed as shown in Figure 3. The excised uterus and its appendages are shown in Figure 4.

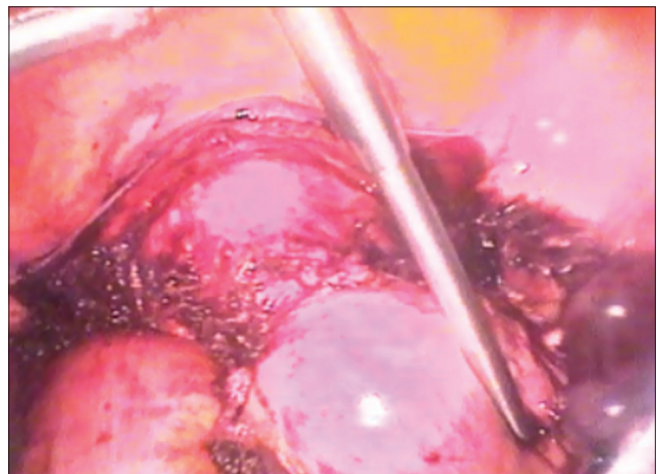
Post-operatively, the patient remained stable. She was discharged home about 20 hours post-operatively on oral analgesics and antibiotics and was seen in the gynecology clinic one week post-operatively. All her wounds had healed satisfactorily, and she had no complaints.

## DISCUSSION

As with most technology-intensive innovations, progress in the field of operative gynecological laparoscopy has been slow in the underdeveloped world. In Nigeria, laparoscopic retrieval of a missing IUCD, laparoscopic ovarian drilling for PCOD, and LAVH have all been reported by Ikechebelu *et al.*<sup>6,7</sup> We, however, did not encounter any report of TLH from Nigeria in the literature.



**Figure 1:** Intra-operative picture showing the surgeon and camera person during the procedure



**Figure 2:** Laparoscopic view of the uterus and the rim formed by the improvised colpotomizer just before anterior colpotomy



**Figure 3:** The abdomen immediately after the procedure



**Figure 4:** The excised uterus and its appendages

TLH is an advanced gynecological laparoscopy procedure requiring sound understanding of pelvic anatomy, proficiency in the safe use of energy sources, as well as laparoscopic suturing and knotting skills. Robotic TLH is being performed in some centers in developed countries where the facilities are available, but this has not demonstrated any advantage over the non-robotic approach. In fact, in addition to its higher cost, robotic TLH is associated with a longer operation time.<sup>8</sup>

Local adaptation and clever improvisation are highly essential to the successful practice of gynecological laparoscopy in a resource-poor setting. For instance, the use of advanced energy sources such as Harmonic<sup>®</sup> and LigaSure<sup>®</sup> is widespread for TLH in developed countries, but these technologies are not readily available in resource-poor settings. In the case presented, the entire procedure was successfully carried out using simple monopolar diathermy.

Similarly, the RUMI<sup>®</sup> uterine manipulator and Koh<sup>®</sup> colpotomizer are of proven benefit for TLH and are now very popular. However, the lack of these devices was overcome with the use of a simple Spackman's cannula secured to a vulsellum for uterine manipulation, which was further enhanced with the use of a laparoscopic myoma screw.

The plastic container of a 50 ml syringe made an excellent colpotomizer, although it meant releasing and re-creating pneumoperitoneum before the uterus could be removed vaginally. To overcome this limitation in future, we propose that at the time of applying the improvised colpotomizer, a long stay-suture should be applied to the cervix vaginally and secured to the perineal drape. This will provide a ready traction handle for the uterus when the colpotomizer is being removed after colpotomy, thereby avoiding excessive loss of pneumoperitoneum.

The safety of day-case TLH is well-established.<sup>9,10</sup> Our patient was discharged home on the first post-operative day in stable condition. The possibility of such early discharge is an important advantage in a center like ours where there is usually a lot of pressure on bed spaces owing to a large turnover of patients for gynecological surgery and a limited number of beds.

In conclusion, it is hoped that this case report demonstrates clearly that with adequate skill and the ability to adapt locally and improvise cleverly, even the advanced operative gynecological laparoscopy procedures are attainable in a low-resource setting.

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