

# Total lap. hysterectomy with prior bilateral kidney transplant. Experience in Hospital General de México

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## Abstract

*Uterine myomatosis is the main cause of abnormal uterine bleeding in women. The diagnosis approach is a challenge to the gynecologist; they must provide the ideal treatment to improve the quality of life of the patient. Laparoscopic hysterectomy is emerging as one of the elected procedures for such pathology. In previous renal transplants, it has been reported that minimal invasion is a useful alternative as opposed to a surgical approach when it comes to uterine pathology; however, there are very few cases reported in the literature with a bilateral renal transplant.*

**Keywords:** Hysterectomy. Laparoscopic surgery. Kidney transplantation. Uterine fibroids.

## Introduction

### Total laparoscopic hysterectomy

Surgical procedures, which include total hysterectomy as management for benign and malignant pathology of the uterus and adnexa, are abdominal and vaginal approaches. The vaginal approach compared to the abdominal approach has better results in terms of invasion; however, it is limited by the size of the tumor as well as vaginal elasticity and the patient's surgical history<sup>1</sup>. In some reviews, the procedure is found as laparoscopic-assisted vaginal hysterectomy, where important steps of the hysterectomy are performed laparoscopically, mainly vascular ligations on superior pedicles. To reduce the incidence of urinary tract injuries, bladder retraction is proposed as well as vaginal ligation of the uterine arteries and cardinal ligaments, leaving only the laparoscopic approach to verify the integrity of the abdominal structures and hemostasis<sup>2</sup>.

The implementation of the laparoscopic approach (minimally invasive surgery) has increased in recent years along with the indications for its application<sup>3</sup>. The benefits of minimally invasive surgery are reflected in shorter surgical time, less bleeding, lower rate of postoperative infections, and decreased hospital stay and convalescence<sup>4</sup>.

The challenges and limitations of minimally invasive surgery for benign pathology lie mainly in the training of gynecologists in this tool, as well as in the limited availability of the procedure at all levels of care. Even with this, the increase in the use of minimally invasive surgery in procedures such as hysterectomy, even in malignant pathologies of the uterus and adnexa, is notable in the past 20 years, revolutionizing gynecological surgery<sup>4</sup>.

Here, we present the case of a patient with benign gynecological pathology, with multiple comorbidities, highlighting the history of a double kidney transplant, as well as previous peritoneal dialysis on multiple occasions; this represented a challenge in the surgical approach for the

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gynecology service. Together with the patient, we opted for the minimally invasive approach, despite expecting the presence of multiple abdominal adhesions. It is vitally important to highlight the participation of the transplant service of this hospital unit since in this way we ensure the integrity of both kidney grafts and their valuable support in the surgical approach. It is important to mention that trans- and post-surgical surveillance by the anesthesiology and intensive care service set the tone to ensure that renal function was preserved, corroborated at discharge and in outpatient surveillance by nitrogen levels and urinary index.

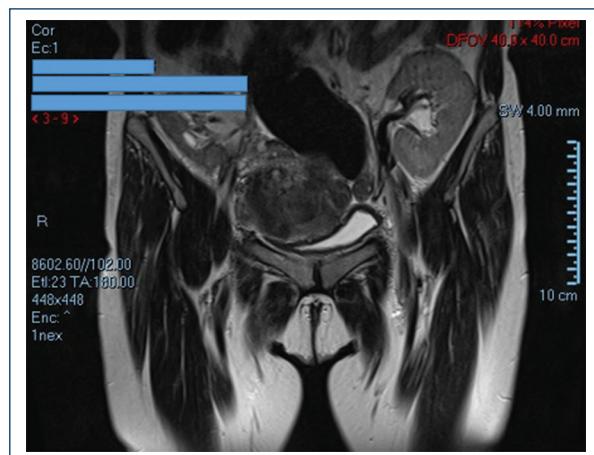
Despite the therapeutic success in this case, we do not have a wide range of cases to issue recommendations regarding the management of this type of patient, but we highlight multidisciplinary management, which undoubtedly improved the result.

## Case report

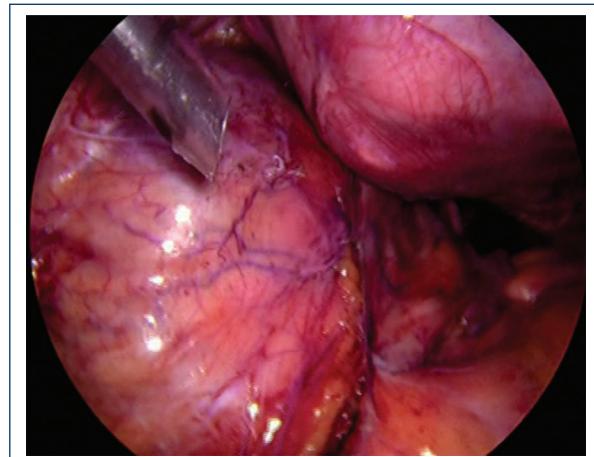
A 45-year-old patient presents with systemic arterial hypertension for 1 year, Type 2 diabetes mellitus for 2 years, both under treatment, and Hepatitis C due to transfusion without treatment or follow-up since 2013. She underwent a double kidney transplant secondary to congenital renal hypoplasia and first implant dysfunction (1996, 2011) in this hospital, under management with immunomodulatory drugs, with adequate function at the time of the protocol (Fig. 1). The patient presented uterine artery embolization in 2018 and had multiple transfusions (last on 05/29/21) due to anemic syndrome.

The patient began her current condition 2 years before the surgical protocol with abnormal uterine bleeding characterized by an increase in the amount and duration of bleeding (approximately 400-600 ml of bleeding per day) as well as occasional intermenstrual bleeding, with abundant clots, despite multiple pharmacological treatments with NSAIDs, antifibrinolitics and combined oral contraceptives for 1 year; in addition to placement of a levonorgestrel-releasing intrauterine device in January 2021, expelled 1 month later without symptom control. The patient was hospitalized in May 2021 for anemic syndrome due to uterine myomatosis of small and medium-sized FIGO 2-4 elements. For this reason, total laparoscopic hysterectomy is performed.

Extensive adherensiolysis was performed with meticulous hemostasis, releasing them, revealing a uterus measuring  $12 \times 8 \times 5$  cm, with irregular edges due to multiple fibroids, both ovaries measuring  $2 \times 2$  cm, and



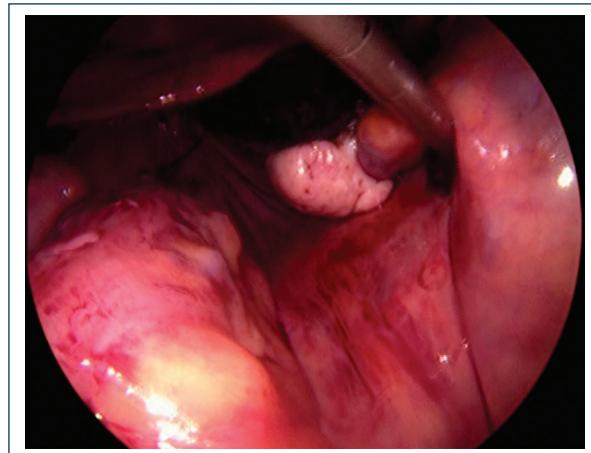
**Figure 1.** Abdominal magnetic resonance imaging with evidence of two kidney grafts in the pelvic location.



**Figure 2.** Left kidney graft in relation to the uterus and left annex.

salpinges without macroscopic alterations (Fig. 2). Hysterectomy with bilateral salpingectomy was performed without complications, the specimen was extracted vaginally, total closure of the dome was performed (Fig. 3), and subsequently, cystoscopy was performed showing urine ejection through both ureters, with which we terminated the procedure with a total bleeding of 150 ml. During the procedure, the transplant service verifies the integrity of the kidney grafts as well as the ureteral tract, without identifying any alterations.

Subsequently, during surveillance in the recovery area, the patient presented a decrease in the urinary index, so it was decided to admit her to the intensive care unit, where she remained under surveillance for



**Figure 3.** Closed vaginal dome with preservation of adnexa.

24 h with discharge due to improvement in condition after replacement of fluids and volume expanders. She was discharged with total laparoscopic hysterectomy and bilateral salpingectomy secondary to uterine myomatosis and adherensiolysis chronic kidney disease KDIGO II, kidney transplant secondary to renal hypoplasia (1996) and renal implant dysfunction (2011), systemic arterial hypertension under treatment, Type 2 diabetes mellitus in treatment and post-transfusion Hepatitis C infection (2013) without treatment.

The patient presented an adequate evolution and gynecological examination without alterations. The histopathology report indicates predominantly intramural and submucosal myoma measuring 8x8 cm.

## Conclusions

Only one case has been reported of a patient with the same characteristics with a satisfactory evolution and discharge after the surgical event, so the report of this case is very important to, in this way, share our experience and work for the management of patients with these types of comorbidities<sup>5</sup>.

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## Conflicts of interest

The authors declare no conflicts of interest.

## Ethical disclosures

**Protection of humans and animals.** The authors declare that no experiments on humans or animals have been performed for this research.

**Confidentiality of data.** The authors declare that they have followed their center's protocols on the publication of patient data.

**Right to privacy and informed consent.** The authors have obtained the informed consent of the patients and/or subjects referred to in the article. This document is in the possession of the corresponding author.

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