INTRODUCTION

Surgery in obstetrics and gynecology was performed traditionally through laparotomy or vaginal approach. Although a laparotomy is advantageous for the surgeon, there are disadvantages for the patient including a large abdominal incision, prolonged hospitalization, increased postoperative analgesic requirements,and increased morbidity (1) .This has led surgeons to seek out minimally invasive approaches. Laparoscopy offers advantages to the patient in the form of improved cosmesis, decreased blood loss, less post-operative analgesic requirements, shorter hospitalization time, and quicker recovery (2).

In laparoscopic surgery, the fulcrum point created by the trocars limits the surgeon to four degrees of freedom reducing dexterity. In addition, because of the fulcrum at the trocars, the movements of the surgeon's hands result in movements in the opposite direction at the working end of the laparoscope, making movements counterintuitive (3).Tremor amplification can also occur from the use of long rigid instruments for prolonged periods in a fixed position. The laparoscopic surgeon must also accommodate to a two-dimensional screen, which limits the depth perception compared to the three-dimensional vision given by the open surgery (3).

Robotic technology, more specifically telerobotic surgical systems, offers the opportunity to bridge this gap between laparotomy and laparoscopy by enabling minimally invasive surgery with three-dimensional vision, ergonomically

optimal positioning, tremor filtration, and laparoscopic instruments with intra-abdominal articulation (4).

The Da-Vinci robot offers advanced imaging and enables the operator to visualize the abdominal cavity in a three-dimensional view. It also allows increased dexterity and precision.

The Da-Vinci robot also scales the surgeon's movements to filter out natural tremor (5-7). Robotic systems are more precise in knot tying and fine tasks than standard laparoscopic instruments, especially with finer suture (8-10). Robotic surgery can also minimize differences between novice and expert laparoscopic surgeons that allow surgeons to complete more complex tasks with the help of a robot (10).

The role of Robotics in gynecologic surgery is rapidly expanding. Current applications include but not limited to robot-assisted laparoscopic hysterectomy, myomectomy, tubal reanastomosis, sacrocolpopexy, and cancer for staging (11).