Removing Barriers Associated with Vaginal Hysterectomies to Improve Outcomes

Introduction

More than 600,000 hysterectomies are performed each year, making hysterectomy one of the most frequently performed surgeries in the United States.[1]

Surgeons utilize different approaches for the hysterectomy depending on the reason for the hysterectomy, pathology, surgeon's experience and the patient's overall health. The traditional (open) approach is the abdominal hysterectomy. Minimally invasive hysterectomy approaches include vaginal and laparoscopic (including robotic). Minimally invasive approaches are associated with less pain, shorter hospital stays, speedy recoveries and faster return to normal activities when compared to abdominal hysterectomies. Minimally invasive procedures are also associated with better outcomes. Vaginal hysterectomy is preferred over laparoscopic and laparoscopic assisted vaginal hysterectomy due to less operative time and hospital cost.

The cost difference will differ by state and insurance company, but Healthgrades.com notes that a vaginal hysterectomy costs around $2000 less than other surgical approaches and other sources show the cost difference being much greater. Abdominal hysterectomy is the most expensive.

A well-documented systematic review of 47 randomized controlled trials provided evidence that a vaginal approach is the safest and most cost-effective hysterectomy route.[2] The American College of Obstetrics and Gynecology (ACOG) advises that this is the least risky approach to hysterectomy, requires less healing time, and whenever possible should be the first choice.

The Challenges of Vaginal Approach

There have been challenges to the adoption of the vaginal approach despite the benefits of lower cost, the association with better outcomes, and fewer complications when compared to the laparoscopic and abdominal approaches. Limitations in exposure and visualization, low volume caseload, lack of experience, difficulty in learning to perform the procedure, and technical difficulties have been cited by gynecologists as barriers to performing the vaginal approach. There has also been an erroneous assumption that vaginal surgery has not changed with the times and that it is only indicated in procedures that involve a small and prolapsed uterus.

Currently, the vaginal approach is most commonly performed with handheld retractors, a surgeon and two assistants who are positioned at the bedside. The surgeon usually has the best, and possibly the only view of the surgical site. In order to obtain visualization, the two assistants must firmly grasp retractors during the entire case. Because of the anatomy and the positioning of the patient, the assistants must hold the retractors in awkward positions in limited space. Considering a potential surgery time of one to two hours, this can lead to significant ergonomic challenges for the assistants, including fatigue and muscle strain. The difficulty in holding the retractors can also lead to exposure and visibility issues during the case due to fluctuating tension on the retractors, the need to reposition retractors due to the assistants' discomfort, and the general awkward position necessary for the assistants to hold the retractors. Potential patient injury can occur if the assistants use too much force and/or inconsistent force to retract tissue.

Solution

"A self-retaining fixed table-mounted retractor system such as the Bookwalter® Magrina vaginal retractor eliminates the need for handheld retractors and eases strain on the two bedside assistants," according to Rosanne Kho MD, Section Head of Benign Gynecology at Cleveland Clinic. Additionally, this retractor system allows fixed, even pressure on the delicate tissue; has ergonomic benefits for the surgeon and the assistants; provides consistent, optimal visibility and exposure; and also allows trainees to focus on learning instead of retracting.

The Bookwalter® Magrina has several proprietary enhancements that allow for maximum surgical success and patient safety.

- **Segmented Ring with Suture Slots:** This ring conforms to the patient's anatomy for increased exposure and patient safety. Other retractors utilizing a fixed ring offer a one-size-fits-all angle which may cause risk of excessive pressure points on obese and other patients. The Bookwalter® Magrina suture slots eliminate need for multiple hemostats attached in surgical field saving time and site clutter.
- **Rotilt® Self-retaining Tilt Ratchets:** The innovative, functional ratchets stay in place on the ring allowing release and adjustment without removal of the blade. The blades can be released for manipulation or pressure relief without being completely removed from the surgical site.

Optional custom lateral and posterior blades designed to improve exposure in patients who are of varying sizes are also available. Dr Kho states: "For me, women come in all shapes and sizes and we also use the different size blades to achieve what we need to accomplish at certain points of the surgery." With limited blade selection at critical points of the procedure, exposure and visualization are compromised and surgery may be prolonged.

- **Long Lateral Blades:** The long lateral blades are used in women with higher BMI (with more protuberant buttocks), with high cervix (with minimal descensus) and/or in women with significant vaginal laxity. The long lateral blade is used only after entry into the posterior culdesac. The long blade provides the best consistent posterior exposure without having to adjust it repeatedly.
- **Short Posterior Blade:** The short posterior blade should be used when making the initial incision around the cervix. Using the long posterior blade will push the cervix back, making it more difficult to access for the initial circumferential incision.

Utilizing these specialized retraction techniques will enhance the surgeon's ability to overcome the challenges associated with the vaginal approach.

Summary

Adopting the technique and becoming proficient at performing the vaginal hysterectomy using the Bookwalter® Magrina has enabled many surgeons to overcome the barriers previously associated with the vaginal approach and increased the number of patients that are able to benefit from lower costs, better outcomes, fewer complications and other significant advantages of minimally invasive surgery.

Rosanne Kho MD, Section Head of Benign Gynecology at Cleveland Clinic did not receive compensation for her time or literary contribution.

References Available Upon Request.

1 https://www.ncbi.nlm.nih.gov/pubmed/29641835 , Practice Patterns and Complications of Benign Hysterectomy Following the FDA Statement Warning Against the Use of Power Morcellation. JAMA Surg. 2018 Jun 20;153(6):e180141. doi: 10.1001/jamasurg.2018.0141. Epub 2018 Jun 20

2 Aarts JW1, Nieboer TE, Johnson N, Tavender E, Garry R, Mol BW, Kluivers KB; Surgical approach to hysterectomy for benign gynaecological disease; https://www.ncbi.nlm.nih.gov/pubmed/26264829 ; Cochrane Database Syst Rev. 2015 Aug 12;(8):CD003677. doi: 10.1002/14651858.CD003677.pub5.

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