The successful surgical management of heavy menstrual bleeding with endometrial resection and ablation techniques is more dependent on the skill of the surgeon than the technique used, concluded an intervention review conducted by the Cochrane Menstrual Disorders and Subfertility Group.

Heavy menstrual bleeding, or menorrhagia, can cause anemia and reduce a woman’s quality of life. Traditional first-line therapy has been medical management with iron supplements, nonsteroidal anti-inflammatory drugs, oral contraceptives, oral progestogen, or a hormonal intrauterine device. However, medical therapies often are inadequate.

Hysterectomy is the most effective treatment of menorrhagia, but removal of the uterus can cause severe adverse effects and may not be an acceptable option to women of childbearing age. Endometrial ablation—performed using a variety of techniques that destroys the endometrium—has gained ground as a less invasive, uterus-sparing option. Endometrial resection, which uses a wire loop to remove the lining of the uterus, is another popular method. However, both endometrial ablation and resection can cause subfertility.

According to the authors, the gold standard resection and ablation techniques for the endometrium are laser thermal ablation, transcervical resection, and rollerball ablation. All of these techniques require visualization of the uterus with a hysteroscope, thus requiring a skilled surgeon.

However, newer, “second-generation” ablative techniques, such as bipolar radiofrequency, microwave ablation, and thermal balloon ablation, have been developed. Some of these newer techniques still require the use of a hysteroscope or are in need of additional refinement and investigation.

This analysis compares the effectiveness, safety, and acceptability of the first- and second-generation techniques for the management of heavy menstrual bleeding in premenopausal women. A total of 25 trials involving 4040 women were included.

There was insufficient evidence to suggest superiority of one technique over another in pairwise comparisons between individual ablation and resection methods, the authors concluded. In addition, there were no overall differences in the improvement of heavy menstrual bleeding or patient satisfaction when newer second-generation techniques were compared with the gold-standard hysteroscopic ablative techniques.

Second-generation techniques, compared with first-generation techniques, were associated with shorter surgical time (15-minute average), increased use of local anesthesia (relative risk [RR], 2.8), and increased chance of equipment failure (RR, 4.3). The complications of fluid overload, uterine perforation, cervical
lacerations, and hematometra occurred less often during the second-generation ablative procedures. However, the second-generation procedures were associated with a greater incidence of nausea, vomiting, and uterine cramping.

The risk of needing additional surgeries or hysterectomy up to 10 years after the initial surgery was reduced when second-generation ablative methods, compared with first-generation techniques, were used for the treatment of heavy menstrual bleeding. However, there was no reduced risk when the follow-up period was less than 10 years.

Pertinent Points:
- There is no evidence that any one technique for endometrial ablation or resection, whether a gold-standard method or a newer technique, is more effective than others in managing heavy menstrual bleeding.
- Patient satisfaction seems to be high with both first- and second-generation procedures.
- Second-generation ablative techniques took less time to perform and required less anesthesia than the gold-standard methods but were associated with an increased chance of equipment failure and a greater incidence of nausea, vomiting, and uterine cramping.