Cost-effectiveness of heavy menstrual bleeding treatments

NEWS
Pain Management

Heavy menstrual bleeding affects so many women which affect the quality of life and significant cost to the healthcare system. There are many treatment options available that offer the different potential to control the symptom. These are highly variable at initial costs, but the relative value of these treatment options is unknown. The present study aids to determine the relative cost-effectiveness of 4 treatment options for heavy menstrual bleeding.

This treatment includes- hysterectomy, resectoscopic endometrial ablation, nonresectoscopic endometrial ablation, and the levonorgestrel-releasing intrauterine system.

A decision tree was formulated to evaluate private payer costs and quality-adjusted life years over a 5-year time horizon for premenopausal women with heavy menstrual bleeding and no suspected malignancy. In the case of each treatment option, probabilities derived from the literature review was used to find out the frequencies of minor complications, major complications, and treatment failure resulting in the need for additional treatments. So the comparison between the treatment was done regarding total average costs, quality-adjusted life years, and incremental cost-effectiveness ratios. Probabilistic sensitivity analysis was performed to understand the range of possible outcomes if model inputs were varied.

The findings revealed that the levonorgestrel-releasing intrauterine system resulted in superior quality-of-life outcomes to hysterectomy with lower costs. Through probabilistic sensitivity analysis, the levonorgestrel-releasing intrauterine system was found to be cost-effective in comparison to hysterectomy in the majority of scenarios (90%). Both resectoscopic and nonresectoscopic endometrial ablation had reduced costs compared with the hysterectomy but average quality of life result was lower. As per standard willingness-to-pay thresholds, resectoscopic endometrial ablation was considered cost-effective compared with hysterectomy in 44% of scenarios. The nonresectoscopic endometrial ablation was considered cost-effective compared with hysterectomy in 53% of scenarios.

Comparison of all trade-offs associated with 4 possible treatments of heavy menstrual bleeding. The levonorgestrel-releasing intrauterine system came out to be superior to both hysterectomy and endometrial ablation in terms of cost and quality of life. Hysterectomy is correlated with a superior quality of life and fewer complications than either type of ablation but at a higher cost. Women who are not willing or unable to choose the levonorgestrel-releasing intrauterine system as the first-course treatment for heavy menstrual bleeding, consideration of cost, procedure-specific complications, and patient preferences can guide the decision between hysterectomy and ablation.

Source: American Journal of Obstetrics & Gynecology
Link to the source: http://www.ajog.org/article/S0002-9378(17)30868-2/fulltext
Original title of article: Cost-effectiveness of treatments for heavy menstrual bleeding
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SearchTags: Exploratory, Levonorgestrel, Heavy menstrual bleeding, Uterus, Progestin hormone, Decision tree, Probabilistic sensitivity analysis, intrauterine