

Endometrial ablation for women with heavy menstrual bleeding: A systematic review and network meta-analysis

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October 19, 2021

Abstract

Background: Endometrial ablation (EA) is a less invasive treatment alternative to hysterectomy for heavy menstrual bleeding, but which ablation technique works best remains unknown. Objectives: A systematic review and network meta-analysis to evaluate the efficacy of different first and second generation EA techniques. Search strategy: A systematic search of online databases from inception. Selection criteria: Randomised controlled trials of EA techniques. Data Collection and Analysis: Primary outcomes (amenorrhoea rate and patient satisfaction rate at short (up to 12 months), intermediate (between 12 months and 5 years), and long term (5 years or more) follow-up) and secondary outcomes (re-intervention rate) were compared between first and second generation EA techniques. Treatment effects of different second generation EA techniques were compared. Main results: Comparing first versus second generation EA, there was no significant difference in amenorrhoea rates at short (OR 1.27, 95%CI 0.83-1.95), intermediate (OR 0.79, 95%CI 0.48-1.30), or long term (OR 1.39, 95%CI 0.94-2.07) follow-up. This was the same with patient satisfaction rates at short (OR 0.76, 95%CI 0.53-1.09), intermediate (OR 0.76, 95%CI 0.47-1.23), and long term (OR 0.68, 95%CI 0.31-1.51) follow-up. No difference in re-intervention rates was demonstrated. Highest amenorrhoea rate was achieved with bipolar radiofrequency, followed by hydrothermablation, microwave and thermal balloon ablation. Conclusions: Second generation EA seem to be as effective as first generation techniques in achieving amenorrhoea, high patient satisfaction and low re-intervention rate. Bipolar radiofrequency ablation seems to be the best amongst second generation EA in achieving amenorrhoea. Funding: None Keywords: 'endometrial ablation', 'menorrhagia', 'heavy menstrual bleeding'

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Figure 1: Amenorrhoea rate

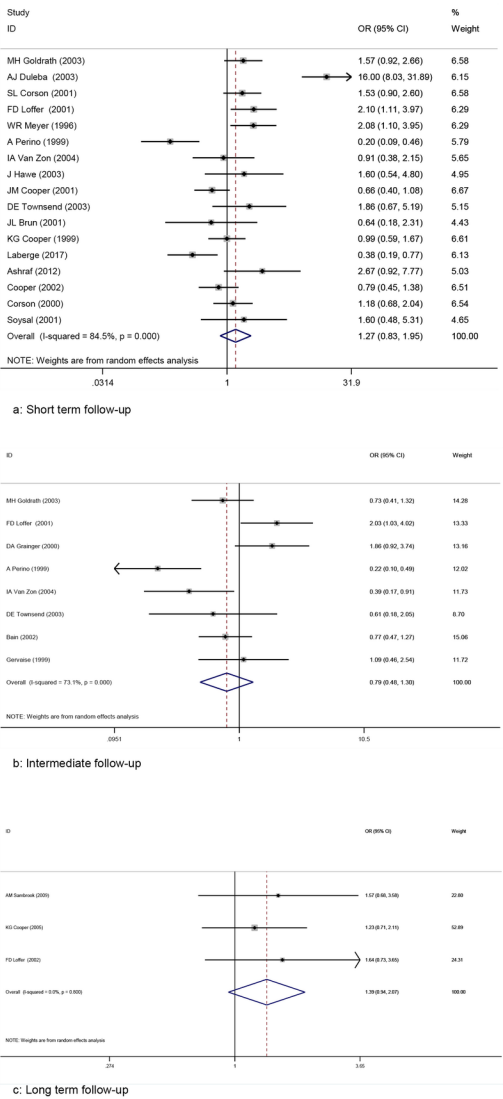
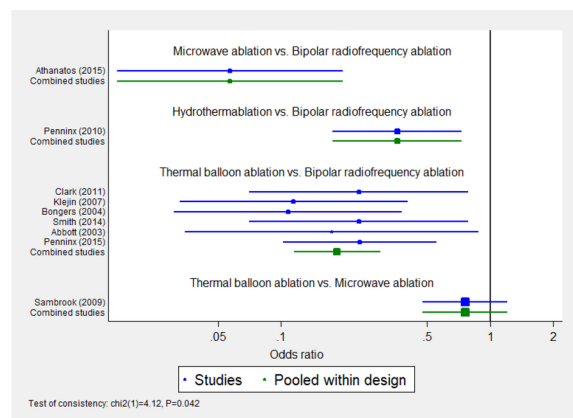


Figure 2: Network Meta-analysis of amenorrhoea rate achieved by second generation endometrial ablation techniques at short term follow-up



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Table 1 - Pairwise comparisons.docx available at <https://authorea.com/users/441801/articles/542256-endometrial-ablation-for-women-with-heavy-menstrual-bleeding-a-systematic-review-and-network-meta-analysis>

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Table 2 - Pairwise and NMA results.docx available at <https://authorea.com/users/441801/articles/542256-endometrial-ablation-for-women-with-heavy-menstrual-bleeding-a-systematic-review-and-network-meta-analysis>