

## A Retrospective Review of Patient Outcomes Comparing Novasure, Thermablate, Microwave Endometrial Ablation (MEA) and the Mirena Intrauterine System (IUS)

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**Study Objective:** To compare outcomes of endometrial ablation techniques; Novasure, Thermablate, Microwave Endometrial Ablation (MEA) and Mirena intrauterine system (IUS).

**Design: Retrospective review.**

Setting: Antrim Area Hospital, Department of Gynaecology, Northern Ireland, UK.

**Patients:** 180 patients with menorrhagia underwent either Novasure, Thermablate, MEA or Mirena insertion. Study period 24 months (1/1/08 to 31/12/09). Reviewed at least 4 months post procedure.

**Intervention:** Novasure (n=50), Thermablate (n=40), MEA (n= 50) or Mirena insertion (n= 40).

**Measurements and Main Results:** Data was collected by telephone questionnaire and chart review. Subjective menstrual loss and pain were rated pre and post procedure. Amenorrhoea, subsequent hysterectomy, satisfaction, recommendation rates and complications were recorded.

Menstrual loss improved in 95% (38/40) of the Thermablate group, 90% (45/50) of the Novasure group, 72% (36/50) of the MEA group and 88% (35/40) of the Mirena group. Dysmenorrhoea improved in 76% of the Thermablate group, 74% of the Novasure group, 57% (25/44) of the MEA group and 74% (26/35) of the Mirena group.

Amenorrhoea rate was 36% (18/50) in the Novasure group, 30% (12/40) in the Thermablate group, 10% (5/50) in the MEA group and 28% (11/40) in Mirena group.

Post procedure hysterectomy rates were 6%, 2.5%, 16%, 2.5% respectively for the Novasure, Thermablate, MEA and Mirena group. No major complications occurred.

**Conclusion:** Thermablate patients reported the greatest improvements in Menorrhagia (95%) and dysmenorrhoea (76%). Amenorrhoea was reported in approximately 1/3 of patients after Novasure, Thermablate or Mirena. MEA has a comparatively inferior clinical outcome with 16% of patients going on to have a hysterectomy.

