

Original Article

Efficacy of a Polyethylene Oxide–Sodium Carboxymethylcellulose Gel in Prevention of Intrauterine Adhesions After Hysteroscopic Surgery

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ABSTRACT **Study Objectives:** To assess the efficacy of a polyethylene oxide–sodium carboxymethylcellulose gel (Intercoat; Gynecare, division of Ethicon, Inc., Somerville, NJ) in preventing the development of de novo intrauterine adhesions (IUA) after hysteroscopic surgery and to rate the patency of the internal uterine ostium at 1-month follow-up diagnostic hysteroscopy.

Design: Randomized controlled study (Canadian Task Force classification I).

Setting: University hospital.

Patients: One hundred ten patients diagnosed during office hysteroscopy as having single or multiple lesions suitable for surgical treatment or resistant dysfunctional uterine bleeding requiring endometrial ablation.

Interventions: Patients were randomized to 2 groups. Group 1 underwent hysteroscopic surgery plus intrauterine application of Intercoat gel, and group 2 underwent hysteroscopic surgery only (control group). Follow-up office hysteroscopy was performed at 1 month after surgery to assess the rate and severity of IUA formation and to rate the patency of the internal uterine ostium after the surgical intervention.

Measurements and Main Results: Compared with the group 2, group 1 demonstrated a significant reduction in the incidence (6% vs 22%; $p < .05$) of de-novo IUAs. Application of the gel seemed to reduce the severity of IUAs, with fewer moderate and severe IUAs at follow-up in group 1 in comparison with group 2 (33% vs 92%). Furthermore, group 1 demonstrated significant improvement in the degree of patency of the internal uterine ostium (41.9% of cases) in comparison with diagnostic office hysteroscopy performed at enrollment ($p < .05$). In contrast, in group 2, worsening of patency of the internal uterine ostium was recorded in 18.2% of cases ($p < .05$).

Conclusions: Intercoat gel seems to prevent de novo formation of IUAs and to improve the patency of the internal uterine ostium at follow-up hysteroscopy. However, larger studies are needed to confirm these findings. Journal of Minimally Invasive Gynecology (2011) 18, 462–469 © 2011 AAGL. All rights reserved.

Keywords: Barrier agent; Cervical patency; Hysteroscopic surgery; Intrauterine adhesions; Prevention

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Intrauterine adhesions (IUAs) are fibrous intrauterine bands on opposing walls of the uterus. The primary factors that may trigger IUA formation include curettage after abortion or postpartum, when the uterus is more prone to injury; infections; prolonged retention of an intrauterine device; and operative hysteroscopy [1–4].

Recent developments in technique and technology have encouraged the rapid widespread use of hysteroscopic