Abstract Anna Fernlund, half time control

Medical treatment versus expectant management of early pregnancy failure with retained gestational sac in utero and vaginal bleeding

Background Early miscarriage occurs in 10-20% of clinically recognized pregnancies. Early miscarriage usually has psychological effects. Patients with early miscarriage substantially contribute to the costs and workload of an emergency department.

Complications after early miscarriage are rare independent of the type of treatment. Expectant or medical management are valuable alternatives to surgical evacuation.

Misoprostol, a synthetic prostaglandin E1 analogue, is the most studied medical regimen. Estimating the success rate of any treatment depends on several factors such as the length of follow-up and definition of complete miscarriage. Published studies are heterogeneous in these aspects. The type of miscarriage, but also other factors, probably matter for how well non-surgical miscarriage treatment succeeds.

Objective To compare misoprostol (800 µg per vaginam) treatment with expectant management in early miscarriage with retained gestational sac in utero and vaginal bleeding with regard to medical and psychological recovery, fertility after miscarriage and patient satisfaction. Predictive factors for treatment success will be explored.

Methods We conducted a parallel randomized controlled open label trial. Outcomes were the rate of complete miscarriage ≤10, ≤17, ≤24, ≤31 days, short term complications, fertility after miscarriage and psychological aspects (paper I, III, IV). In paper II possible predictive factors of treatment success are explored.

Results Paper I: Complete miscarriage within 10 days was achieved in 62/94 (66%) of the patients in the misoprostol group and in 39/90 (43%) in the group managed expectantly. The number of patients undergoing D&E on their own request was higher in the expectantly managed group as was the number of patients making out-of-protocol visits. No major side effects were reported in any group.

Paper II: No factor could predict treatment success after misoprostol treatment. Success rate of expectant management was higher in miscarriages classified as fetal demise than in anembryonic gestations, 53.8% (28/52) vs 33.0% (11/33) (P = 0.06) ≤10 days. In expectantly managed patients, the higher the gestational age, the longer the crown rump length and the smaller the gestational sac the higher the likelihood of treatment success.

Paper III (psychological impact of miscarriage): all data have been collected, analysis has started
Paper IV (future fertility): all data have been collected

**Significance** Treatment of early miscarriage should be individualized. Our results will contribute to better understanding the natural course of early miscarriage and better counseling of patients.

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