Intervention for postpartum infections following caesarean section

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Aim

- The aim of this study is to examine the benefits of using Negative Pressure Wound Therapy (NPWT) on wound healing following postoperative infection after caesarean section (CS). NPWT is compared with conventional wound treatment.
- In addition, the study seeks to elucidate the health economic costs and consequences of this type of infection and treatment.

Methods

- A randomized controlled trial with a concurrent economic evaluation
- Data will be collected prospectively from:
  1) Nurse registrations of used wound dressings
  2) Medical records
  3) Self-administered patient questionnaires
  4) Cosmetic outcome scores from pictures of the wounds, which will be scored in a blinded setting by two experts
- We expect to include 50 women of whom two-thirds will be randomized to NPWT.

Study population

- Women who experience spontaneous wound dehiscence or who require repeat surgery due to postoperative infection after CS is included in the study
- The study is conducted in the Obstetrical units of Odense University Hospital and Hvidovre Hospital, Denmark, which account for 11,000 deliveries and approximately 2,500 CSs annually

Preliminary results

Randomized Controlled Trial

- Over a period of six months, six women required repeat surgery because of a postoperative wound infection
- Two women were excluded because one had a stillbirth and the other declined to participate. The remaining four women were included in the pilot study.
- Three of these women were treated with NPWT and one with conventional treatment. Three women were re-sutured as per protocol on the fourth day after initial surgery (two NPWT and one conventional treatment).
- One extremely obese NPWT woman (BMI>47) was operated on several times and her wound healed subsequently by primary intention over a period of three months. The findings of the pilot study emphasise patient risk factors such as BMI.

Economic Evaluation

- If a conventionally treated patient requires more than four times the amount of wound dressings compared to a NPWT patient, NPWT becomes cost-effective. If the change of wound dressing is performed in the evening or at night, the cost increases in the conventional group due to higher hourly wages. With successful NPWT treatment, the woman requires only outpatient care which reduces hospital costs.
- Accordingly, the benefit of the treatment is twofold:
  a) A reduction in health care costs (inpatient bed days and readmissions)
  b) An increase in the women's health-related quality of life