Barrier agents for adhesion prevention after gynaecological surgery.

Authors: Ahmad G., Duffy J.M.N., Farquhar C., Vail A., Vandekerckhove P., Watson A., Wiseman D.

Publication Date: 2008

Abstract:

Background: Pelvic adhesion can form as a result of inflammation, endometriosis or surgical trauma. During pelvic surgery, strategies to reduce pelvic adhesion formation may include placing synthetic barrier agents such as oxidised regenerated cellulose, polytetrafluoroethylene or Fibrin sheets between the pelvic structures. Objectives: To assess the effect of physical barriers used during pelvic surgery in women of reproductive age on pregnancy rates, pelvic pain, or postoperative adhesion reformation. Search strategy: We searched the Cochrane Menstrual Disorders and Subfertility Group Trials Register (searched September 2007) which is based on regular searches of MEDLINE, EMBASE, CINAHL, PsycINFO and CENTRAL, plus handsearching of 20 relevant journals and conference proceedings, and searches of several key grey literature sources. In addition, companies were contacted for unpublished trials. Selection criteria: Any randomised controlled trials (RCTs) comparing the use of physical barriers versus no treatment or other physical barriers in the prevention of adhesions in women undergoing gynaecological surgery. Data collection and analysis: Review authors assessed trial eligibility and quality. Main results: Sixteen RCTs were included. Five trials randomised patients while the remainder randomised pelvic organs. Laparoscopy (six trials) and laparotomy (10 trials) were the primary surgical techniques. Indications for surgery included myomectomy (five trials), ovarian surgery (five trials), pelvic adhesions (four trials), endometriosis (one trial), and mixed (one trial). Eleven trials assessed Interceed versus no treatment, two assessed Interceed versus Gore-Tex, one trial assessed Gore-Tex versus no treatment, and one trial assessed Seprafilm versus no treatment. A single trial assessed Fibrin sheet versus no treatment. No studies reported pregnancy or reduction in pain as outcomes. The use of

Interceed was associated with reduced incidence of pelvic adhesion formation, both new formation and reformation following laparoscopic surgery or laparotomy. However, this result should be interpreted with caution. Gore-Tex was more effective than no barrier or Interceed in preventing adhesion formation. There was only limited evidence that Seprafilm was effective in preventing adhesion formation following myomectomy and no evidence to support Fibrin sheet. Authors' conclusions: The absorbable adhesion barrier Interceed reduces the incidence of adhesion formation following laparoscopy and laparotomy, but there are insufficient data to support its use to improve pregnancy rates. Gore-Tex may be superior to Interceed in preventing adhesion formation but its usefulness is limited by the need for suturing and later removal. There was no evidence of effectiveness of Seprafilm and Fibrin sheet in preventing adhesion formation.