To mesh or not to mesh: a review of pelvic organ reconstructive surgery

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Abstract
Pelvic organ prolapse (POP) is a major health issue with a lifetime risk of undergoing at least one surgical intervention estimated at close to 10%. In the 1990’s, the risk of reoperation after primary standard vaginal procedure was estimated to be as high as 30 to 50%. Based on this estimate of recurrence and in order to reduce the risk of relapse, gynecological surgeons started to use mesh implants in pelvic organ reconstructive surgery with the emergence of new complications, also implying reoperations. With the success of mesh in reducing the risk of recurrence for abdominal hernia (75% reduction), it was hypothesized that its use could proffer similar benefits in POP surgery. Recent studies have nevertheless shown that the risk of POP recurrence requiring reoperation is lower than previously estimated, being closer to 10% rather than 30%. The development of mesh surgery, under considerable pressure and incentives from the marketing industry, was tremendous during the past decade, and preceded any studies supporting its benefit for our patients. Nowadays, randomized trials comparing the use of mesh to native tissue [...]
Pelvic organ prolapse

- **Central defect**
  - Paravaginal defect
  - Associated apical prolapse
  - Increase in risk factors (COPD, obesity, constipation, physical activities with straining)
- **Anterior compartment**
  - Recurrence
  - Intensive physical activity
  - Intercourse
  - Long life expectancy
  - Absence of intercourse
  - Short vagina
  - Increase in risk factors (COPD, obesity, physical activities with repetitive straining, constipation)
  - If hysterectomy, prefer subtotal
  - Associated apex suspension (sacrospinous or utero-sacral) with or without vaginal hysterectomy if uterus still present
- **Apical compartment**
  - Long life expectancy
  - Intensive physical activity
  - Intercourse
  - Old patient
  - Short life expectancy
  - Reduced physical activities
  - Absence of intercourse
  - Primary case
  - Sufficient vaginal length
- **Posterior compartment**
  - Primary case
  - Recurrence
- **Total vaginal eversion**
  - Old patient, short life expectancy, no intercourse, high operative risk due to comorbidities
  - Colpocleisis
  - Total vaginal eversion
  - Old patient, short life expectancy, no intercourse, high operative risk due to comorbidities

Vaginal reconstructive surgery with native tissue

Abdominal (laparoscopic) reconstructive surgery with mesh

Primary case

Recurrence involving only the anterior compartment

Primary case

Recurrence