Laparoscopic surgery for benign gynaecological disease

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English.

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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Centre is organized under The Norwegian Directorate for Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributers for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, November 2009

Key Messages (in English)

Laparoscopic surgery for benign gynaecological disease

Background
Today laparoscopy, or minimally invasive surgery, is used for many surgical and gynaecological conditions which earlier required open surgery

The use of laparoscopic operations in Norway varies from one gynaecological department to another. The national guide in general gynaecology gives no clear advice on which procedure should be preferred for operations on ovarian cysts or hysterectomy.

Main findings
- Overall the documentation on clinical effectiveness of laparoscopic surgery for benign gynaecological diseases is of low to medium quality.
- The benefits are shorter hospital stay, less pain, fewer infections and faster recovery compared with open surgery
- The disadvantages are the longer operating time and greater risk of damage to the bladder or urethra.

Executive summary (in English)

Laparoscopic surgery for benign gynaecological disease

BACKGROUND

Today laparoscopy, or minimally invasive surgery, is used for many surgical and gynaecological conditions which earlier required open surgery. Laparoscopy is a common choice for ectopic pregnancy or ovarian cysts, but is less frequent for conditions which require more advanced surgical procedures, such as hysterectomy (removal of the uterus).

The use of laparoscopic operations in Norway varies from one gynaecological department to another. The national guide in general gynaecology gives no clear advice on which procedure should be preferred for operations on ovarian cysts or hysterectomy.

The Women and Children's Division, Ullevål University Hospital, addressed the Norwegian Knowledge Centre in connection with a study of surgical procedures in the treatment of benign gynaecological disease in Norway, wanting a systematic review of effect and safety of laparoscopy compared with traditional open or vaginal procedure.

METHODS

We performed systematic literature searches in several health related databases (Cochrane, EMBASE and MEDLINE) until September 2009, including systematic reviews and studies that met our inclusion criteria. Quality assessment was based on GRADE.

RESULTS

We included three Cochrane reviews of surgical treatment of benign gynaecological diseases and thirteen new randomised controlled trials published after these reviews.

CONCLUSION

Ectopic pregnancy

One Cochrane review was included that assessed laparoscopic versus open surgery for ectopic pregnancy (5). We did not find any relevant newer RCTs in our updated search. Overall there is low quality evidence that laparoscopic surgery was less effective than open surgery. In addition the implication of these findings is uncertain due to old studies.

Benign ovarian cysts

One Cochrane review was included that assessed laparoscopic versus open surgery for benign ovarian cysts (6). We did not find any relevant RCTs in our updated search. Overall there is low to medium quality evidence that laparoscopic surgery for ovarian cysts gave shorter hospital stay, less pain, fewer postoperative infections, and quicker recovery than the open surgery. The surgical approach is similar for laparoscopic removal of ectopic pregnancies and ovarian cysts, and laparoscopic surgery has been shown to be less traumatic than open surgery. Due to small studies, we were not able to assess rare complications.

Hysterectomy for benign disease

One Cochrane review was included that assessed laparoscopic versus open surgery for benign ovarian cysts (9, 11). We found 13 relevant RCTs in our updated search (se attachment “vedlegg” 3), five of which were included in the updated Cochrane review (11).

Overall there is low to medium quality evidence that laparoscopic hysterectomy gave shorter hospital stay, quicker recovery, fewer wound infections and fever episodes after surgery compared with open surgery. The drawbacks were longer operation time and a higher risk of bladder or urethra injury.

No benefits of laparoscopic hysterectomy versus vaginal procedure have been documented. The vaginal procedure has shown shorter operation time than the laparoscopic procedure, and a systematic review concluded that the vaginal procedure should be chosen.

NEED FOR FURTHER RESEARCH

The overall documentation on the clinical effectiveness for laparoscopic surgery for benign gynaecologic diseases varies for the different conditions, but overall efficacy is far better addressed than safety. There is a paucity of studies to identify how laparoscopic surgery could be safely performed in different patient groups, and especially high risk populations, and initiatives to improve surgical quality.

Further studies of the safety of different types of laparoscopic hysterectomies are needed. Does the complication rate increase when the complexity of the laparoscopic technique increases? Is total laparoscopic hysterectomy as safe as other techniques?

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