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Laparoscopic hysterectomy for early endometrial cancer

In Europe and North America endometrial carcinoma is the most common cancer of the female genital tract and the fourth most common cancer site after breast, lung, and colorectal cancer.¹ The treatment for endometrial carcinoma is, in operable patients, primarily surgical. Surgical treatment includes obtaining peritoneal fluid or washings for cytology, total hysterectomy, which by definition includes the uterine cervix and bilateral salpingo-oophorectomy. In selected cases, there is a place for omentectomy and a thorough retroperitoneal lymph-node dissection.¹ The role of routine pelvic and para-aortic lymphadenectomy remains, however, controversial.^{2–5}

Although the complication rate of a simple hysterectomy with bilateral salpingo-oophorectomy is not very high, a substantial number of women diagnosed with endometrial cancer have other comorbidities such as old age, diabetes, hypertension, and obesity. Abdominal surgery therefore exposes them to an increased risk of complications. Vaginal hysterectomy has been suggested as an attractive alternative for these patients, but this approach does not allow exploration of the abdominal cavity, peritoneal washing, and lymph-node dissection. Laparoscopic-assisted vaginal hysterectomy or total laparoscopic hysterectomy overcomes the previous limitations. Some researchers have suggested that laparoscopic surgery in obese or elderly patients with endometrial cancer is safe.⁶ Tozzi and colleagues⁷ were the first to report survival outcomes from a prospective randomised controlled clinical trial of 122 women. Assessment of treatment-related morbidity showed a significantly lower incidence

of major and minor complications in the laparoscopy group. In two meta-analyses,^{8,9} it was concluded that laparoscopy resulted in fewer complications, and less blood loss than with laparotomy, and a similar survival. However, in the meta-analysis of Palomba and colleagues,⁸ only 172 patients were randomised to endoscopic treatment and the follow-up was very short. Robotic-assisted surgical staging and treatment of endometrial carcinoma has been suggested recently as a valuable alternative for open-abdominal surgery.

The Gynecologic Oncology Group (GOG) randomly assigned 2616 patients to laparoscopy or laparotomy in the LAP-2 study.¹⁰ All patients had complete surgical staging including pelvic and para-aortic lymphadenectomy. Laparoscopic-assisted vaginal hysterectomy, total laparoscopic hysterectomy, or robotic-assisted total laparoscopic hysterectomy were allowed. All patients with endometrial carcinoma confined to the uterus including the endometrioid and the non-endometrioid (with worse prognosis than the endometrioid type) types were eligible.

In *The Lancet Oncology* today, two randomised trials comparing total laparoscopic hysterectomy with abdominal hysterectomy in early endometrial carcinoma are reported.^{11,12} In the Dutch study¹¹ (n=283) none of the patients had lymphadenectomy and only low-risk patients were included (grade 1 or 2 endometrioid cancer clinically confined to the uterus). Additionally, only patients with a uterine size smaller than that expected at 12 weeks of pregnancy were eligible. In the Australian study¹² (n=361) patients with endometrioid carcinoma (all



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grades) clinically confined to the uterus and with a uterus smaller than that expected at 10 weeks of pregnancy were eligible. 52% of the patients had a pelvic or para-aortic lymphadenectomy. Unfortunately none of these three randomised trials^{10–12} have yet reported survival data, but only on health-related issues and complications.

In the GOG study, laparoscopy resulted in fewer postoperative moderate or severe adverse events, a shorter hospital stay, and a longer operative time than did laparotomy.¹⁰ In the Dutch study¹¹ the major and minor complication rates were the same in the group of patients treated with laparoscopy compared with laparotomy. However, total laparoscopic hysterectomy was associated with less blood loss, less use of pain medication, a shorter hospital stay, and a longer operative time than with laparotomy. The difference with the GOG study¹⁰ is probably due to the fact that the patients in the Netherlands only underwent a hysterectomy and bilateral salpingo-oophorectomy and not a complete surgical staging including pelvic and para-aortic lymphadenectomy. Similarly, as many as 26% of the patients randomly assigned to laparoscopy in the GOG study¹⁰ were converted to laparotomy compared with only 10.8% and 2.4% in the Dutch¹¹ and Australian studies,¹² respectively. In these studies, the surgeons needed to show evidence that they were experienced in total laparoscopic hysterectomy and needed to be certified by the study coordinators before including patients in these trials. Another possible reason for the low conversion rate in the Dutch¹¹ and Australian¹² studies compared with the GOG study¹⁰ might be the selection of the patients based on uterine size, which was not an inclusion criterion in the GOG study.

Health-related outcome was reported in all three trials.^{11–13} Better physical functioning, body image, reduced pain, and an earlier resumption of work over the 6-week post-laparoscopy period was reported in the GOG¹⁰ and the Dutch study¹¹ than in the laparotomy patients, but these differences disappeared 6 months after surgery. In the Australian study,¹² quality of life was still improved 6 months after surgery.

In conclusion, laparoscopic treatment of endometrial cancer clinically confined to the uterus is associated with less pain, shorter hospital stay, faster recovery, and better quality of life at least 3 months postsurgery, but with a longer operative time than with laparotomy. Survival results have not yet been reported by any of

the three trials. However, because hysterectomy and bilateral salpingo-oophorectomy can be safely done with laparoscopy, laparoscopy can be recommended in those patients with no contraindications for laparoscopy—eg, large-volume uterus or known extensive adhesions. For patients with an indication for complete surgical staging, including lymphadenectomy, the relapse-free and overall survival rates, and whether the sites of recurrences are similar in both surgical groups, should be reported before laparoscopy is regarded as the standard of care. Furthermore, the effect of large volume or expertise on the treatment outcome, especially in elderly and obese patients, and the role of robotic-assisted laparoscopic treatment of endometrial cancer should be investigated further.

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