Prophylactic Salpingectomy for Prevention of Ovarian Cancer at the Time of Elective Laparoscopic Cholecystectomy

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ABSTRACT

The majority of ovarian cancers are now believed to originate in the fimbriae of the fallopian tubes as serous tubal intraepithelial carcinomas (STICs). Removal of the fallopian tubes (salpingectomy) has been associated with a reduced risk of developing ovarian cancer, leading to gynecologic societies recommending prophylactic salpingectomy at the time of pelvic surgery in appropriate women. Cholecystectomy for benign gallbladder disease is often performed laparoscopically and presents a potential opportunity for opportunistic salpingectomy to prevent ovarian cancer.

This study aims to evaluate the feasibility and safety of prophylactic salpingectomy in women older than 45 years undergoing elective laparoscopic cholecystectomy for benign gallbladder disease. Patients undergoing these procedures were approached and recruited. Patients were excluded if they had extensive previous surgery with probable difficult access to the pelvis or a family history suggesting a BRCA mutation. Counseling regarding the salpingectomy was provided by a surgeon, gynecologist, or both. Primary outcomes included rate of accomplishment of prophylactic salpingectomy, time needed for salpingectomy, intraoperative or postoperative problems or complications, and 30-day readmission rate. Patients were followed up for 30 days following salpingectomy.

A total of 105 women of mean age 55 years and mean parity 2 from 6 centers consented and were scheduled for elective laparoscopic cholecystectomy with concomitant prophylactic salpingectomy. The rate of acceptance of salpingectomy was 62% at the 3 centers entering the largest number of patients. Salpingectomy was completed in 98 (93.3%) of the 105 consenting patients. Salpingectomy was abandoned in 7 patients because of adhesions preventing surgical access to or visualization of the fallopian tubes. The median additional surgical time required for salpingectomy was 13 minutes, and no intraoperative or postoperative complications attributable to salpingectomy occurred. Following surgery, 1 patient developed pancreatitis, and 1 was readmitted to the hospital on postoperative day 6 with abdominal pain that resolved the subsequent day. Although beyond the protocol-stipulated follow-up period, 1 patient presented with ascites and peritoneal carcinomatosis due to high-grade serious carcinoma 28 months after surgery.

This study revealed that approximately 60% of women approached for having prophylactic salpingectomy at the time of laparoscopic cholecystectomy were open to the idea. The results also demonstrate that this operation is feasible and appears safe with 93.3% success rate, only a 13-minute increase in operation time, and no reported complications. Prophylactic salpingectomy here is performed in women undergoing nongynecologic surgery, suggesting that the procedure could be accomplished during many other laparoscopic or minimally invasive procedures.

EDITORIAL COMMENT

(Ovarian cancer is a rare but lethal disease. Preemptive strategies such as genetic testing to identify at-risk patients and opportunistic salpingectomy have been recommended as strategies to prevent these cancers. For women who have a BRCA mutation, risk-reducing salpingo-oophorectomy can reduce their risk of developing ovarian cancer by greater than 80%. However, for women for whom mutational status is unknown, opportunistic salpingectomy, the removal of fallopian tubes at the time of other primary gynecologic surgery, is suggested. The foundation of this approach is based on studies showing that STICs found in the fallopian tube are the putative precursor lesions of...
high-grade serous carcinomas. Serous tubal intraepithelial carcinoma has been identified in the fallopian tube in 59% of women with high-grade serious carcinoma. Opportunistic salpingectomy is endorsed by the American College of Obstetricians and Gynecologists, Society of Gynecologic Oncology, and other societies.

The investigators from Austria undertake a novel approach of performing prophylactic salpingectomy at the time of elective laparoscopic cholecystectomy. This was a multicenter study of 105 patients. When proposed to patients, it was acceptable in 60% of patients and was actually accomplished in 93% at the time of surgery. It was notable that the median additional time to perform salpingectomy was minimal: 13 minutes (range, 4–45 minutes). The authors noted no intraoperative or postoperative complications, and only 7 patients failed to undergo salpingectomy because of adhesive disease or poor tubal visualization. No malignancies were diagnosed; however, there was no comment about whether STIC was found. In the majority of cases, no new trocars and no trocar repositioning were required. Of 105 patients, the general surgeon was able to perform the salpingectomy independently in 79 cases (75%); a gynecologist was called to perform the case in 19 cases, and in 7 cases, both physicians were present.

The authors, in a previous study, had determined that women would be amenable to prophylactic salpingectomy at the time of their cholecystectomy. In the current study, they report their experience with this approach and showed this to be feasible and safe. They outline a number of challenges including the need for the general surgeon to discuss this additional procedure, obtain informed consent, and potential billing issues such as approval of a secondary procedure outside of general surgery procedure. The benefit, however, is significant. In their abstract for the 2020 Society of Gynecologic Oncologists meeting, Drs Cook and Landen estimate that if salpingectomy was performed at the time of 3 benign procedures (cholecystectomy, ventral hernia repair, bariatric surgery) there would be a reduction in cases of ovarian cancer by 28% to 38%. While the current authors cite that this would be “an exercise in bridging surgical silos,” the larger benefit is to the patient. Performing opportunistic salpingectomy at the time of nongynecologic elective surgery may be a promising approach to decreasing the incidence of ovarian cancer.—LVL

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**41st Annual North American Meeting of the Society for Medical Decision Making; October 21, 2019; Portland, Oregon. Keynote Address: The More Who Die, the Less We Care: Confronting the Deadly Arithmetic of Compassion**

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**ABSTRACT**

Dr Slovic, a psychologist at the University of Oregon, has devoted his research career to this topic. He is a member of the National Academy of Arts and Sciences.