

Opportunistic salpingectomy in women undergoing hysterectomy for benign indications: a retrospective analysis

L Dising, KM Harlow, OC Smart, SA De Silva

Department of Obstetrics and Gynaecology, Christchurch Women's Hospital, New Zealand
Lekha.Dising@cdhb.health.nz

Introduction

Ovarian cancer is the fifth leading cause of cancer death in New Zealand women, with a five-year survival rate of only 39%.¹ There is no effective screening method and the vast majority of cases are not detected until late stage. High-grade serous carcinoma (HGSC) is the most common and aggressive type of epithelial ovarian cancer (EOC). Traditionally, research has focused on the hypothesis that HGSC arises from the ovarian surface epithelium, however recent evidence suggests that a significant proportion of cases may arise from precursor lesions in the fallopian tube epithelium (FTE). This theory is based on the detection of early lesions, namely serous tubal intraepithelial carcinomas (STIC), found in the fallopian tubes of women at high risk of developing serous carcinomas and women with disseminated HGSCs.² As such, opportunistic bilateral salpingectomy (BS) has been proposed as a primary preventative strategy against the development of HGSCs of the ovary in low-risk women. Experts predict a 40% reduction in the rate of HGSC over the next 20 years if gynaecologists were to consider salpingectomy at the time of every hysterectomy and sterilisation procedure with referral of all patients with HGSC for genetic testing and hereditary cancer counselling.³

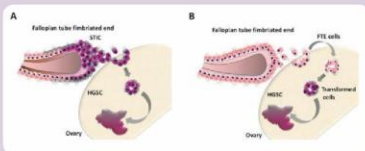


Figure 1.

Fallopian tube hypothesis on the origin of high-grade serous carcinoma.⁴

- A. Fallopian tube epithelium (FTE) cells undergo neoplastic changes, becoming serous tubal intraepithelial carcinoma (STIC) cells and transform to invasive HGSC.
- B. Alternatively, normal FTE cells are entrapped in the ovary, undergoing progressive neoplastic transformation inside the ovary.

In 2009, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) published guidelines recommending that 'consideration be given to bilateral salpingectomy at the time of hysterectomy for benign gynaecological disease and that the risks and benefits be discussed with the patient on a case-by-case basis'.⁵ For patients planning hysterectomy, counselling should therefore include the option of opportunistic BS and a comprehensive review of the risks and benefits. The aim of this study was to assess rates of opportunistic BS at the time of hysterectomy for benign indications at Christchurch Women's Hospital, New Zealand.

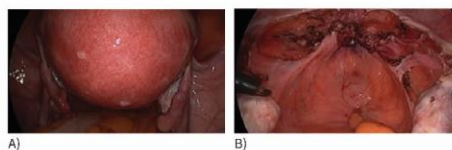


Figure 2.

Pelvic anatomy as seen at total laparoscopic hysterectomy with risk reduction bilateral salpingectomy: A) pre-surgery; B) post-surgery with ovaries retained.⁶

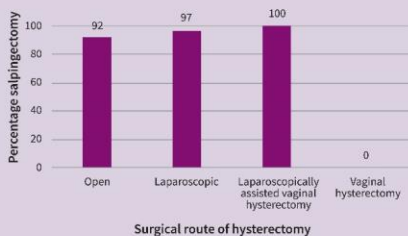
Methods

A retrospective analysis was undertaken of women of all ages who underwent a hysterectomy for benign indications over a 20-month period at Christchurch Women's Hospital, New Zealand. Data regarding indication for surgery, surgical route of hysterectomy and salpingectomy rates were obtained from electronic medical records. For a subset of 50 patients, outpatient clinic letters were examined to elicit the proportion of clinicians undertaking pre-operative risk-benefit counselling. A descriptive analysis was performed.

Results

During the study period (01/07/2016 – 28/02/2018), 392 hysterectomies were performed for benign indications, of which 72% (n = 281) underwent opportunistic BS. Salpingectomy rates varied with route of hysterectomy; 92% for open hysterectomy, 97% for laparoscopic hysterectomy, 100% for laparoscopically assisted vaginal hysterectomy and 0% for vaginal hysterectomy (see Figure 3). The main factor associated with non-completion of salpingectomy was vaginal surgical approach. The most common surgical route was laparoscopic hysterectomy (43%), followed by open hysterectomy (30%), vaginal hysterectomy (24%) and laparoscopically assisted vaginal hysterectomy (2%). A risk-benefit discussion of opportunistic BS was only documented in 2% of outpatient clinic letters.

Figure 3. Percentage salpingectomy as per route of hysterectomy



Discussion

Opportunistic BS is commonly performed at the time of hysterectomy within our unit. Counselling of the risks and benefits is rarely documented in the patient record. The recent paradigm shift in the pathogenesis of ovarian cancer may provide clinicians the opportunity to reduce cancer risk in their patients. However, randomised controlled trial data is still needed to conclusively prove the safety of incorporating opportunistic BS into other gynaecological surgery and to determine the efficacy for ovarian cancer prevention. Further long-term studies are also needed to confirm that salpingectomy does not compromise ovarian function. Nevertheless, the existing evidence suggests that opportunistic BS is safe and likely to be effective and cost-effective as a risk-reducing strategy for ovarian cancer.³ The decision whether the fallopian tubes should be removed or retained should be made on an individual basis, as per RANZCOG guidelines, and the patient must be included in a documented decision-making process.

References

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