

# Brenner Tumor Found Incidentally in a Hysterectomised Patient: A Case Report

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Brenner tumors are uncommon neoplasms of the ovary accounting for 1.5-2% of all ovarian neoplasms. They arise from ovarian surface epithelium or pelvic mesothelium through transitional metaplasia. In 30% cases an association with another epithelial ovarian neoplasm is observed. They are usually diagnosed incidentally in pathologic examination.

This case report emphasis on the decision to perform an elective bilateral salpingo-oophorectomy (BSO) at the time of a hysterectomy for a benign condition in postmenopausal women.

**Key Words:** Brenner tumor, Postmenopausal prophylactic oophorectomy

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## Introduction

Ovarian cancer remains the fifth deadliest cancer among women because of its early asymptomatic nature and lack of efficacious screening methods, leading to frequent late-stage diagnosis.<sup>1</sup> Brenner tumor of ovary is an uncommon neoplasm accounting for 1.5-2% of all ovarian neoplasms.<sup>2</sup> It is derived from the surface epithelium of the ovary or the pelvic mesothelium.

After menopause, the ovary continues to produce androstenedione and testosterone in significant amounts and these androgens are converted in fat, muscle, and skin into estrone. This makes the literature about prophylactic oophorectomy confusing. Numerous reports link oophorectomy to higher rates of cardiovascular disease, osteoporosis, hip fractures, dementia, short-term memory impairment, decline in sexual function, decreased positive psychological well-being, adverse skin and body composition changes, as well as more severe hot flushes and urogenital atrophy. The potential benefits associated with oophorectomy include prevention of ovarian cancer, a decline in breast cancer risk, and a reduced risk of pelvic pain and subsequent ovarian surgery.<sup>3</sup>

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This report presents a postmenopausal asymptomatic woman in whom a rare ovarian neoplasm; a benign brenner tumor was diagnosed incidentally during sacrocolpopexy.

## Case Report

A 56 year old patient with a history of vaginal hysterectomy due to uterine prolapse admitted to hospital with a complaint of vaginal mass. Bilateral oophorectomy was not performed in the previous operation, since they had a normal appearance. The examination of the patient revealed cuff prolapse and atrophic ovaries in ultrasound. Sacrocolpopexy was planned. In the operation, the ovaries seemed atrophic, but firmly adhered to the vaginal cuff secondary to previous operation. Bilateral oophorectomy was performed, since the patient was in menopause for 4 years and the ovaries were injured in dissection of mucosa above the cuff. The microscopic examination of left ovary revealed a borderline serous tumour (Figure 1) with a 3mm diameter benign brenner tumour focus in the capsule (Figure 2).

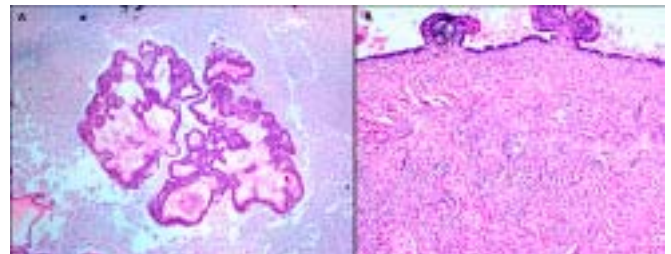


Figure 1A: Atypical proliferative serous tumour (borderline serous tumour), H-E, X100. B: Cyst epithelium with moderate cytologic atypia / dysplasia and increase in number of alignment, H-E, X400).

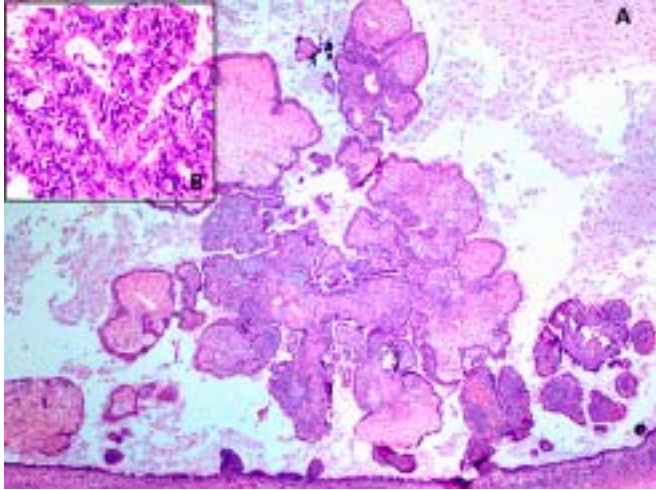


Figure 2A: Free fragments of papillary tumoral growth foci within the cyst, H-E, X100. B: A 3 mm diameter incidental benign Brenner tumor focus on the cyst wall, H-E, X200.

The postoperative course was uneventful and the patient was discharged from the hospital after a period of 4 days. Patient was asymptomatic during her first postoperative visit at 2 months after the operation.

## Discussion

Incidental microscopic tumor was observed in this asymptomatic patient with atrophic ovaries. Following this case, we tried to find an answer to the question: should we perform an elective bilateral salpingo-oophorectomy (BSO) at the time of a hysterectomy for a benign condition in postmenopausal women?

Hysterectomy rates differ according to both patient related factors such as race, socioeconomic and education status, private health insurance and attitudes toward surgery, as well as the training and practice of the surgeon.<sup>4</sup> There is a debate in performing prophylactic oophorectomy during hysterectomy in women who are not at an increased risk of ovarian cancer. Women who do not have a documented germline mutation or who do not have a strong family history suspicious for a germline mutation are considered to be at average risk of ovarian cancer.<sup>5</sup>

Oophorectomy during hysterectomy does not increase the operation time and immediate postoperative complications. Reduction in the future risk of ovarian cancer is the single most common reason for normal ovaries to be removed at the time of hysterectomy, particularly in the postmenopausal women.<sup>6</sup> The most recent Surveillance, Epidemiology and End Results (SEER) calculations of lifetime risk for ovarian cancer are that 1 in 55 women will develop ovarian cancer over their lifetime, or 1.8%.<sup>7</sup> In addition to reduction in future risk of ovarian cancer, oophorectomy declines the risk of

breast cancer, subsequent ovarian surgery and incidence of pelvic pain.

It is difficult for the surgeon and the patient preoperatively to decide for retention or removal of the ovaries. The ultrasound might reveal atrophic or normal sized ovaries and the tumor markers could be normal. In such a case decision of retention is made by gross examination intraoperatively as “they appear normal” but still as in our case a microscopic tumor could be left behind. The insidious nature of ovarian neoplasms do not let us learn the truth until an advanced stage of neoplasm.

Studies on the other behalf supporting the ovaries should be retained say that endocrine function of ovaries continue even in postmenopausal period. Postmenopausal ovaries continue to be active and produce estradiol (at low levels) and testosterone.<sup>8</sup> Testosterone is converted to estrone in peripheral tissues. There are studies pointing that oophorectomy linked to a higher incidence of coronary vascular disease,<sup>9</sup> osteoporosis and hip fractures, a higher incidence of dementia, depressive mood disorders, and a higher incidence of sexual dysfunction and urogenital atrophy.<sup>10</sup>

In conclusion, decision to perform prophylactic bilateral salpingo-oophorectomy for women at average risk of ovarian cancer who are undergoing a hysterectomy for benign conditions in

## Histerektomize Hastada İnsidental Bulunan Benign Brenner Tümörü: Vaka Sunumu

Brenner tümörü tüm over neoplazilerinin %1,5-2'sini oluşturur. Over yüzey epiteli veya pelvik mezotelin transisyonel metaplazisinden kaynaklanır. Vakaların %30'unda başka bir epitelyal over neoplazisi ile birliktelik vardır. Çoğunlukla insidental olarak patolojik incelemede tanı alır.

Bu olgu sunumunda benign bir sebeple postmenopozal dönemde histerektomi uygulanan hastalarda salpingo-oofektomi uygulama kararının gerekliliği araştırıldı.

**Anahtar Kelimeler:** Brenner tümörü, Postmenopozal profilaktik oofektomi

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