INCIDENCE OF SURGICAL CONVERSION TO OOPHORECTOMY AT THE TIME OF PLANNED OVARIAN CYSTECTOMY IN REPRODUCTIVE AGE WOMEN WITH BENIGN PATHOLOGY

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Background: Ovarian function is important for women's health for the lifespan, including cardiovascular protection and prevention of osteoporosis. Oophorectomy and subsequent earlier menopause has been associated with increased risks and shortened lifespan. Unilateral oophorectomy is a known risk of cystectomy and can decrease the time to menopause by 1-2 years.

Objective: To evaluate the incidence of unplanned oophorectomy at the time of ovarian cystectomy in reproductive-aged women and to identify associated risk factors for oophorectomy.

Materials and Methods: Retrospective case control study at a large academic institution. Inclusion criteria: Women 18-45 years old undergoing planned ovarian cystectomy for a benign-appearing ovarian cyst from January 2018 to December 2023. Exclusion criteria included suspected malignancy, planned oophorectomy, or missing relevant surgical or clinical details. The primary outcome variable was the number of cases with unplanned oophorectomies. Secondary variables included: ovarian cyst size, ovarian cyst type, surgical approach, surgical blood loss, as well as demographic variables including age, BMI, race and ethnicity. Students T Test and Chi Square test were used for univariate statistical analyses.

Results: 474 planned ovarian cystectomy cases were identified on medical record review using CPT codes used for surgical case request. 333 patients met the inclusion and exclusion criteria. 314 cases were completed as planned (cystectomy group) and 19 cases were converted intraoperatively (oophorectomy group), with an incidence of 5.7%. (Table 1) The oophorectomy group was significantly older (p=0.01). Open abdominal approach was more likely to be associated with conversion to oophorectomy compared to minimally invasive approach (p=0.006). The two groups had similar BMI, race/ethnicity distribution, ovarian cyst size, type, as well as surgical blood loss.

Conclusions: The risk of intraoperative conversion to oophorectomy is relatively rare and was not associated with ovarian cyst characteristics such as cyst size or type in this analysis. Older reproductive age and surgical approach was associated with a higher risk of oophorectomy. To our knowledge this is the first report of intraoperative conversion in the US and serves an important asset for counseling reproductive age patients who undergo planned ovarian cystectomy for benign conditions. Older age and women with planned open surgical approach should be counseled regarding their increased risk of conversion to oophorectomy and the potential implications if it occurs.

	Cystectomy group (N=314)	Oophorectomy group (N=19)	P value
AGE median [IQR]	30 [25, 35]	37 [25, 41]	**0.01**
BMI median [IQR]	28 [23, 35]	29 [23, 36]	ns

MINIMALLY INVASIVE APPROACH N (%)	288 (98.6)	16 (84.3)	**0.006**
CYST SIZE cm [IQR]	5 [4.0 , 7.0]	5 [4.5, 8.8]	ns
ESTIMATED BLOOD LOSS mL [IQR]	15.0 [5.0, 50.0]	20.0 [7.5, 25.0]	ns
CYST TYPE			ns
MATURE CYSTIC TERATOMA N (%)	85 (27.1)	6 (31.6)	
ENDOMETRIOMA N (%)	42 (13.4)	3 (15.8)	
CYSTADENOMA N (%)	51 (16.2)	5 (26.3)	
HEMORRHAGIC CORPUS LUTEUM N (%)	60 (19.1)	3 (15.8)	
SIMPLE/FOLLICULAR CYST (%)	36 (11.5)	0	
OTHER (%)	39 (12.4)	2 (10.5)	