

# Barriers To Timely Surgical Management and Risk of Oophorectomy for Ovarian Torsion in a National Sample

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## OBJECTIVE

To identify risk factors associated with delayed surgical management of ovarian torsion and risk of oophorectomy

## METHODS

- Cross-sectional analysis of nationwide cohort from 2002-2015 admissions for surgical management of ovarian torsion
- Patients were divided into same-day surgery vs surgery after one day
- Variables included day of presentation, patient and hospital factors as well as type of surgery

## RESULTS

- 148,255 hospital admissions of management of ovarian torsion were analyzed
- 67% of all cases underwent same-day surgery, 21% at day one, and 12% waited >1 day for surgery
- Weekend admissions were 14% less likely to undergo same day surgery (aRR=0.86, 95% CI: 0.85, 0.88)
- Patients with 3 or more comorbidities were 29% less likely to undergo same-day surgery (aRR 0.71, 95% CI: 0.68, 0.74)
- Patients who waited >1 day for surgery had a 5% higher risk of oophorectomy (aRR 1.05, 95% CI: 1.03, 1.07)

## CONCLUSIONS

- The weekend effect and increasing number of comorbidities is associated with lower likelihood of same-day surgery
- Timely management of ovarian torsion is associated with fertility preservation

Weekend presentations of ovarian torsion are 14% less likely to undergo same-day surgery.

Women with 3 or more comorbidities are 29% less likely to undergo same day surgery.

Patients who wait >1 day for surgery had a 5% higher risk of oophorectomy.

## TABLES

Table 1. Timing of Surgical Management

Day of ED Evaluation	Same Day Surgery			Surgery at Hospital Day 1		
	aRR	95% CI	P value	aRR	95% CI	P value
Weekday	0.86	0.85, 0.88	<0.01	0.93	0.91, 0.94	<0.01
Weekend	Reference			Reference		
Comorbidities	aRR	95% CI	P value	aRR	95% CI	P value
No comorbidities	Reference			Reference		
1 comorbid condition	0.91	0.89, 0.93	<0.01	0.95	0.93, 0.97	<0.01
2 comorbid conditions	0.84	0.81, 0.86	<0.01	0.88	0.86, 0.90	<0.01
3+ comorbid conditions	0.71	0.68, 0.74	<0.01	0.78	0.75, 0.80	<0.01

Table 2. Oophorectomy at Time of Surgery

Surgical Timing	aRR	95% CI	P value
Same Day	Reference		
Hospital Day 1	1.01	1.00, 1.03	0.2
Greater than Hospital Day 1	1.05	1.03, 1.08	<0.01

Day of ED Evaluation	aRR	95% CI	P value
Weekday	0.99	0.97, 1.01	0.2
Weekend	Reference		

Medical Comorbidities	aRR	95% CI	P value
No comorbidities	Reference		
1 comorbid condition	1.04	1.03, 1.06	0.37
2 comorbid conditions	1.05	1.02, 1.07	<0.01
3+ comorbid conditions	1.03	1.00, 1.06	0.02