EMBRACE THE PAST
REVOLUTIONIZE
THE FUTURE

THE SOCIETY OF GYNECOLOGIC ONCOLOGY'S
2013 ANNUAL MEETING ON WOMEN'S CANCER®

SGO
Society of Gynecologic Oncology

Bringing Together the Best
in Women's Cancer Care

The Impact of Tubal Sterilization Techniques on the Risk of Serous Ovarian and Primary Peritoneal Carcinoma: A Rochester Epidemiology Project (REP) Study

Collette Lessard-Anderson, MD
William Cliby, MD
Sean Dowdy, MD
Kathryn Handlogten, BS
Rochelle Molitor, BA
Amy Weaver, MS
Jennifer St. Sauver, PhD
Jamie Bakkum-Gamez, MD

Mayo Clinic, Rochester, MN

Society of Gynecologic Oncology

2013 ANNUAL MEETING ON WOMEN'S CANCER

VERBAL DISCLOSURE

- All co-authors report no conflicts of interest

- Rochester Epidemiology Project funded by R01 AG034676 – *NIH (Aging)*

Background

- Historical data shows tubal ligation decreases risk of ovarian cancer
- Emerging data suggests fallopian tube as potential origin of serous gyn cancers
- Numerous methods of tubal sterilization exist, including varying degrees of salpingectomy
- p53 signature a potential serous carcinoma precursor

1. Tworoger et al. *Am J Epidemiol, 2007.*
2. Whittemore A et al. *Am J Epidemiol*, 1992.
3. Rice MS, et al. *J of Ovarian Research,* 2012
4. Crum CP. *Mol Oncol*, 2009.
5. Crum CP, et al. *Clin Med & Research,* 2007.
6. Salvador S. *Int J Gynecol Cancer,* 2009.
7. Kim J et al. *PNAS,* 2012.
8. Carlson et al. *J of Clin Oncol*, 2008.0

Hypothesis

- Excisional tubal sterilization techniques account for decrease in risk of serous EOC and PPC

Materials and Methods

- Population-based, historical case-control study
  - 1966 – 2010
  - Rochester Epidemiology Project (REP)

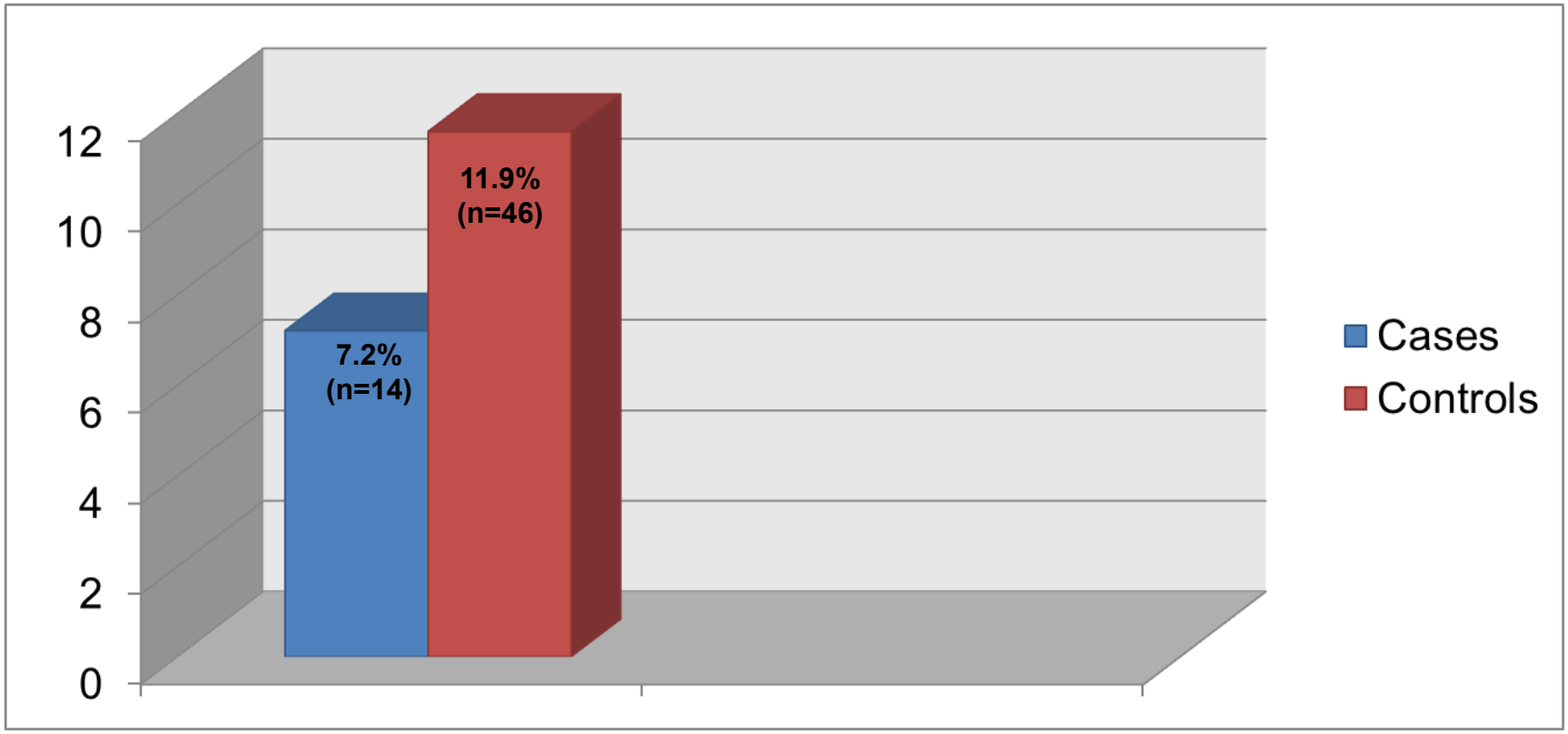
- Cases – all serous EOC or PPC during study period
- Controls – matched for age ± 2 years and index date
  - 2 controls: 1 case

- Excisional tubal sterilization defined as
  - Complete salpingectomy
  - Partial salpingectomy
  - Distal fimbriectomy

Results

Univariate analyses	Cases (n=194)	Controls (n=388)	P value
Age [mean(SD)]	61.4 (15.2)	61.4 (15.2)	
BMI [median(IQR)]	26.5 (22.9, 30.5)	25.9 (22.8, 30.3)	0.38
Gravidity [median(IQR)]	2.0 (1.0, 4.0)	3.0 (2.0, 5.0)	0.003
Parity [median(IQR)]	2.0 (1.0, 3.0)	3.0 (1.0, 4.0)	0.007
OCP use [%]	33.3%	4.28%	0.010
Prior hysterectomy [%]	15.5%	32.2%	<0.001
History of infertility [%]	10 (5.2%)	15 (3.9%)	0.47
History of endometriosis [%]	9 (4.6%)	13 (3.4%)	0.44

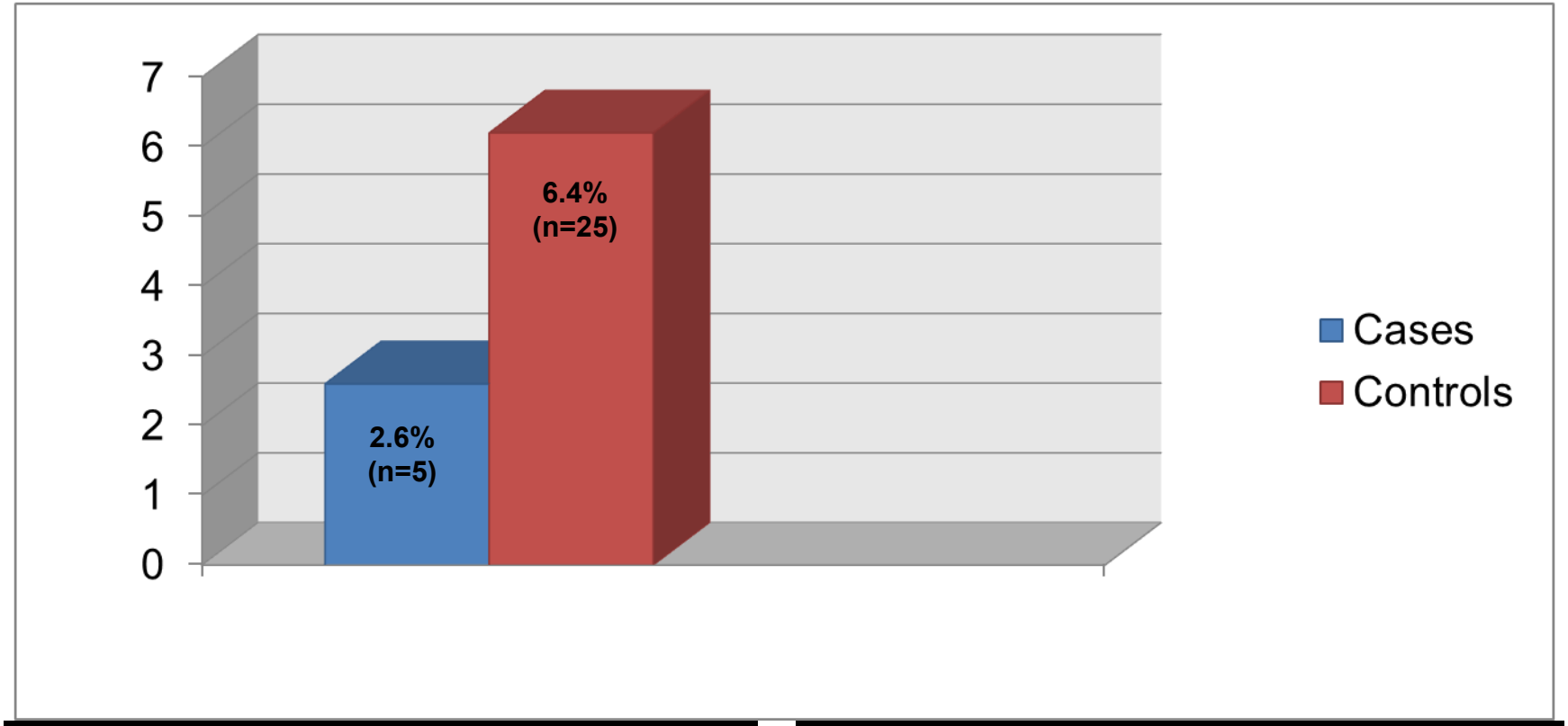
Any Tubal Technique ("Excisional" & Non-Excisional") vs No Tubal



Unadjusted Matched Analysis
OR = 0.54
95% CI, 0.28-1.04
p=0.066

Adjusted Matched Analysis
OR = 0.56
95% CI, 0.28-1.11
P=0.098

“Excisional” Techniques
vs
“No Tubal & Non-Excisional Techniques”



Unadjusted Matched Analysis – “Excisional” vs “No Tubal & Non-Excisional” Techniques	Adjusted Matched Analysis – “Excisional” vs “No Tubal & Non-Excisional” Techniques
OR = 0.37	**OR = 0.36**
95% CI, 0.15-1.00	95% CI, 0.13-1.00
p=0.051	p=0.050

Conclusions

- Excisional tubal sterilization confers greater risk reduction for serous EOC and PPC
- This data further supports the hypothesis of the fallopian tube as a source of serous gynecologic malignancies
- A larger population-based study is warranted to confirm these results