Shah A<sup>1</sup>, Rajan S<sup>1</sup>, Kohli N<sup>1</sup>, Hoyte L<sup>1</sup>
1. Brigham & Women's Hospital/Harvard Medical School

# THE AGE DISTRIBUTION OF PELVIC ORGAN PROLAPSE SURGERY IN THE UNITED STATES

#### Hypothesis / aims of study

To describe and compare the prevalence, demographics, and complications of surgery for pelvic organ prolapse (POP) in the United States across age groups.

## Study design, materials and methods

Data from the 2003 U.S. Census and the 2003 National Hospital Discharge Survey (NHDS) were used. The Statistical Package for the Social Sciences (SPSS) program was used to weight, stratify, and analyze the NHDS patient sample in order to determine the age distribution of POP specific surgeries in 2003. Patients were grouped into 4 categories: Reproductive age (18-39 years), perimenopausal (40-59 years), postmenopausal (60-79 years), and elderly (≥ 80 years). Using these data, we also compared demographics, morbidity, and mortality across age groups.

#### Results

A total of 199,698 women underwent POP surgery in the U.S. in 2003, for a rate of 17.8 surgeries per 10,000 women (95% CI 16.0-19.6 per 10,000). Of all POP surgeries, 14.6% were performed in reproductive age women, 47.8% in perimenopausal women, 31.8% in postmenopausal women, and 5.8% in elderly women. Rates of POP surgery (per 10,000, with 95% CI) were: 6.6 (3.5, 9.7) in reproductive age, 23.6 (20.5, 26.7) in perimenopausal, 30.7 (26.3, 35.1) in postmenopausal, and 17.4 (9.8, 25.0) in elderly women. Among white women, 16.0%, 47.7%, 30.5%, and 5.8% of all POP surgeries were performed in reproductive age, perimenopausal, postmenopausal, and elderly groups, respectively. Among black women, 20.6%, 58.2%, 21.2%, and 0% of all POP surgeries were performed in reproductive age, perimenopausal, postmenopausal, and elderly groups, respectively. Among women of other races, 10.8%, 53.5%, 26.2%, and 9.5% of all POP surgeries were performed in these same groups, respectively. Of all abdominal hysterectomies and vaginal hysterectomies performed for POP, 60.5% and 56.8%, respectively, were performed in perimenopausal women. Of all anterior, posterior, and combined anterior and posterior colporrhaphies, 52.9 %, 42.2%, and 45.7%, respectively, were performed in perimenopausal women. By region, the percentage of POP surgeries performed in perimenopausal versus (vs.) postmenopausal women was 37.3 vs. 41.7 in the Northeast, 41.8 vs. 36.1 in the Midwest, 49.6 vs. 28.8 in the South, and 54.5 vs. 28.4 in the West. Complications of POP surgery occurred in 28.8%, 19.6%, 18.6%, and 22.1% of women in reproductive age, perimenopausal, postmenopausal, and elderly groups, respectively. Mortality due to POP surgery occurred in .02% of all cases.

# Interpretation of results

The greatest percentage of POP surgeries in the U.S. in the year 2003 was performed on perimenopausal women. This was true across races, as well as across all geographic regions except for the Northeast. The rate of POP surgery was highest in postmenopausal women, followed by perimenopausal women. Complication rates were highest in reproductive age women, while mortality was uncommon. These findings contradict the generally held belief that POP is a condition specific to postmenopausal and elderly women. In order to provide adequate counseling and care to women at all stages of their reproductive lives, physicians must recognize that POP is a disorder that affects women of all ages.

## Concluding message

POP is a condition which affects not only postmenopausal and elderly women, but also women in younger age groups. It is important for both physicians and patients to recognize that women who suffer from and seek surgical treatment for POP span the reproductive life cycle.

#### FUNDING: NONE

DISCLOSURES: Three authors have NO disclosures; Dr. Neeraj Kohli has the following disclosures: American Medical Systems, Boston Scientific, Mentor, Novartis, Yamanouchi, CR Bard

HUMAN SUBJECTS: This study was approved by the Brigham and Women's Hospital IRB and followed the Declaration of Helsinki Informed consent was not obtained from the patients.