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O-103 10:45 AM Tuesday, October 19, 2021

ONCOFERTILITY RESEARCH PITFALL? RECALL BIAS AMONG YOUNG ADULT CANCER SURVIVORS. Esther H. Chung, MD, Sloane Mebane, MD, Benjamin S. Harris, MD, MPH, Erin White, MS, Kelly S. Acharya, MD Division of Reproductive Endocrinology and Infertility, Duke University Medical Center, Durham, NC.

OBJECTIVE: Oncofertility literature cites recall bias as a pitfall of retrospective surveys(1,2), but limited data exist to quantify this bias(3). Our objective was to assess recall bias by evaluating how well female cancer survivors remember details regarding their cancer diagnoses, oncology treatment, infertility risk factors, and fertility preservation (FP) counseling.

MATERIALS AND METHODS: We performed a secondary analysis of data collected from an IRB-approved, cross-sectional survey of cancer survivors at a single academic medical center. Female oncology patients 18-44 years old, at least 6 months past their last chemotherapy treatment, were contacted. Patients self-reported information about their treatment, menstrual history before and after chemotherapy, and whether they were offered any FP counseling at the time of diagnosis. Patient-reported versus chart-reviewed data were compared using summary statistics and multivariable logistic regression.

RESULTS: In total, 117 patients completed the survey; 112 were verified via chart review. Cancer type and stage were correctly reported among 95.5% and 81.3% of patients, respectively. When asked to report their chemotherapy regimen, 57.1% reported "I don't know or do not prefer to say." Of those who recalled their treatment, 93.6% and 96.4% accurately remembered their chemotherapy and exposure to radiation, respectively. Regarding FP, 86 patients (80.4%) denied being offered FP counseling; 18 (16.1%) recalled this differently than was documented. Of the 37 (33%) who had documented FP conversations, 13 (35.1%) did not recall this. Concurrent GnRH agonist (GnRHa) therapy was reported by 21.4%, but 9 of these patients denied FP being offered or mentioned. Only 2 (25%) of 8 patients with ovarian reserve testing recalled this being performed, including 3 patients with AMH < 1 ng/ml who responded "no" when asked if they had baseline diminished ovarian reserve. Multivariable logistic regression revealed that older age was significantly associated with not being offered FP (OR 0.87, p=0.02), but age at treatment did not affect accuracy of recall (p=0.4).

CONCLUSIONS: Our results confirm that accuracy of patients' reporting surrounding the details of their oncology treatment is limited by poor recall, particularly regarding their specific chemotherapy regimen and number of cycles. More than 1 in 3 patients documented to have been offered FP counseling do not recall this discussion at the time of diagnosis; 3 in 4 do not recall AMH testing. Importantly, only one-third of cancer survivors had chart-documented FP counseling.

IMPACT STATEMENT: Recall bias significantly impacts oncofertility research. Caution should be used in interpreting retrospective studies without verification via chart-reviewed data. Patients particularly struggle recalling their chemotherapy regimen, the details of which are critical for gonadotoxic risk counseling. With over 1 in 3 unable to recall discussions about FP, with even poorer recall of ovarian reserve testing and its implications, increased efforts are needed to ensure adequate follow-up and counseling beyond the initial visit.

Reference
1. Anazodo et al. How can we improve oncofertility care for patients? Hum Reprod Update 2019;25(2):159–79
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3. Banerjee et al. Occurrence and recall rates of fertility discussions w young breast ca patients. Support Care Cancer 2016;24(1):163–71

O-104 11:00 AM Tuesday, October 19, 2021

TESTICULAR TISSUE CRYOPRESERVATION IN A COORDINATED NETWORK OF ACADEMIC CENTERS. Kien Tran, BS, Hanna Valli-Pulaski, PhD, Amanda Zielen, PhD, Kyle E. Orwig, PhD University of Pittsburgh School of Medicine, Pittsburgh, PA.

OBJECTIVE: Testicular tissue cryopreservation (TTC) is the only fertility preservation option for prepubertal boys who are at risk of infertility due to treatments for cancer, benign diseases requiring BMT, and gender dysphoria. We established a coordinated network of 12 centers in the US that offer TTC with tissue processing and cryopreservation occurring at a centralized laboratory in Pittsburgh. Each patient donates a portion of their tissue to research. We evaluated those tissues to evaluate the impacts of disease, previous medical treatments and duration of cryogenic storage on testicular histology and function.

MATERIALS AND METHODS: For each patient, medical diagnosis, previous chemotherapy exposure, testicular tissue biopsy weight, and presence of germ cells were recorded. Germ cell types were determined by histology and immunohistochemistry. Functional assessments were by xenotransplantation of human testicular cells or tissue fragments into immune-deficient mouse recipients.

RESULTS: Between 2011 – 2021, the University of Pittsburgh Fertility Preservation Program has cryopreserved testicular tissues for 373 patients. The average age of patients was 7.6 years and ranged from 3 months to 34 years old. The average amount of tissue collected was 481.3 mg and ranged from 14.4 mg - 9,824.78 mg. Indications for TTC include cancer (60.6%), myeloablative conditioning prior to bone marrow transplant (29.2%), transgender (2.7%) and others (7.5%). Ninety-four patients (25.9%) had initiated their chemotherapy and/or radiation prior to TTC. Among 10 transgender patients, 8 had initiated hormone suppression treatments prior to TTC. Testicular cell transplantation revealed no difference in colonizing potential from samples frozen for <1 year, 2 years, 3-5 years, or 8-10 years (p>0.05). There was also no difference in colonizing potential from samples that had previous chemotherapy exposure that had no previous therapy (p>0.05). We also xenografted intact testicular tissues from each treatment group and results will be forthcoming. Previous hormone suppression did not impact the number of VASA+ germ cells in testis samples from transgender patients. Testicular cell and tissue xenografting from these frozen and thawed transgender patient samples are underway.

CONCLUSIONS: The coordinated centers mechanism allowed us to accumulate a large number of patients with different diagnoses and treatments. Using the donated tissues, we learned that cryostorage time did not impact the number of transplantable spermatogonia in patient samples. While it is best to cryopreserve tissues prior to the initiation of gonadotoxic treatments, our data suggest that it is sometimes possible to preserve tissue for patients who have already initiated therapy.

IMPACT STATEMENT: Patients and/or guardians are willing to pursue an experimental fertility preservation for their children when no alternatives are available. Functional studies demonstrate safety and feasibility of the TTC protocol and help to accurately counsel patients and their families.

Funding sources: P50 HD096723 (KEO) and 1F31HD101254-01A1) (KT) (Reference)

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SUPPORT: P50 HD096723 (Kyle Orwig) and 1F31HD101254-01A1 (Kien Tran)

O-105 11:15 AM Tuesday, October 19, 2021

THE NEW NORMAL: PATIENT PROGRESSION TO FERTILITY TREATMENT IN A COVID-19 WORLD. Edward Heyeh, BA, MSc, MBA, Yishin Yang, BA, Joseph A. Lee, BA, Janet Choi, MD, Alan B. Copperman, MD1 Progyny, Inc., New York, NY; 2Reproductive Medicine Associates of New York, New York, NY; 3CCRM New York, New York, NY.

OBJECTIVE: The coronavirus (COVID-19) pandemic reshaped access to assisted reproductive technology (ART) treatment. Following ASRM’s March 2020 recommendation to halt all ART treatments, many patients were unable to pursue parenthood until resumption of clinical care. Our study assesses patient progression to reproductive care before, during and after the declaration of the COVID-19 pandemic.

MATERIALS AND METHODS: The study includes patients who sought ART treatment from January 1, 2018 to October 1, 2020. Only patients who underwent an initial consultation were included in the study. Patients were grouped by month in the years of 2018, 2019, and 2020. Patient progression to treatment was confirmed only if the ART procedure occurred within 90 days after initial consultation.

RESULTS: A total of 27,626 initial consultations from patients who sought ART treatment were evaluated in the study. Treatment progression rates for 2018 and 2019 showed high correlation with nearly identical rates.

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per month from March to July [Table 1]. Patient progression declined to 47.9% starting in January 2020 compared to 57.3% in 2018 and 59.4% in 2019 of the same month. Thereafter, progression to treatment dropped to an all-time low (February-March 2020 (32.0-33.0%)). Progression rate increased by late April 2020 (47.7%); and then surged in May 2020 (55.7%) surpassing treatment progression rates between the same months during 2018 (47.4%) & 2019 (47.9%). By the end of August and throughout September 2020 progression to treatment restored itself to rates in 2018 & 2019 [Table 1].

CONCLUSIONS: As compared to cohorts in 2018 and 2019, our study demonstrated a marked decline in progression to ART treatment that coincided with the onset of the COVID pandemic and when many regions of the country restricted all but urgent medical procedures. As COVID-related restrictions lifted, treatment progression rates sharply rebounded and then stabilized by September 2020. The recovery to treatment progression displays fertility care as essential to patients and reaffirms a strong desire to have children.

IMPACT STATEMENT: The barriers related to the onset of the COVID pandemic were short-lived for patients who sought ART treatment. Even with COVID’s introduction of new normal, patients can be reassured that they have the ability to access reproductive care and achieve parenthood.

SUPPORT: None

O-106 11:30 AM Tuesday, October 19, 2021

SEXUAL ASSAULT AND LIFETIME INFERTILITY DIAGNOSIS IN MALE AND FEMALE U.S. MILITARY VETERANS. Ginny L. Ryan, MD, MA, 1 Michelle A. Mengeling, PhD, 1 James C. Torner, PhD, MS, 1 Andrea Holcombe, MS, PhD, 1 Anne G. Sadler, PhD, RN 1 University of Washington School of Medicine, Seattle, WA; 2 Iowa City VA Health Care System, Iowa City, IA; 3 Center for Access and Delivery Research and Evaluation, Iowa City, IA.

OBJECTIVE: Our past survey of women Veterans in one U.S. state suggested an association between lifetime attempted or completed sexual assault (LSA) and self-reported difficulty having a baby. The objective of this study was to query associations between infertility and LSA as well as sexual assault in military (SAIM) in a large, nationally-representative population of reproductive-aged men and women Veterans using robust infertility prevalence measures.

MATERIALS AND METHODS: This was a cross-sectional study of 3,018 U.S. men and women military Veterans using a computer-assisted telephone interview that averaged 87 minutes in duration. Data were collected on Veterans’ socio-demographics, military characteristics and exposures, lifetime attempted and completed sexual assault histories (before, during, and after military service), and reproductive history and health, amongst other experiences. The study included 1,410 women and 1,608 men aged 19–45 years. Data in this analysis include the 1,388 women and 1,590 men who experiences. The study included 1,410 women and 1,608 men aged 19–45 years. Data in this analysis include the 1,388 women and 1,590 men who

| Year | January | February | March | April | May | June | July | August | September | October | November | December |
|------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| 2018 | 57.3%   | 49.9%    | 48.8% | 50.9% | 47.4% | 47.8% | 47.7% | 46.5%  | 54.0%     | 50.9%   | 41.6%    | 45.6%    |
| 2019 | 59.4%   | 56.1%    | 49.6% | 51.1% | 47.9% | 48.3% | 46.6% | 51.2%  | 49.8%     | 44.7%   | 45.0%    | 47.3%    |
| 2020 | 47.9%   | 32.0%    | 33.0% | 47.7% | 55.7% | 51.8% | 50.2% | 53.3%  | 50.2%     | N/A     | N/A      | N/A      |

TABLE 1. ART Treatment Progression Rates Before, During and After the Onset of the COVID Pandemic

with LSA vs. 10.2% without, p = 0.07; 17.8% with SAIM vs. 10.5% without, p = 0.08).

CONCLUSIONS: Negative repercussions resulting from the distressingly prevalent experience of lifetime and in-military sexual assault for U.S. Veterans may include decreased fecundability, at least as measured by infertility diagnosis. Further study of the database will elucidate possible correlated conditions or mediators such as chronic pain, PTSD, sexually transmitted infection, and decreased sexual wellness.

IMPACT STATEMENT: These data provide vital information to providers and policymakers in the VA Healthcare System and beyond on the complex and wide-ranging impact of sexual assault on reproductive health.

SUPPORT: This project was funded by the Department of Veterans Affairs (VA) Health Services Research and Development (HSR&D) IIR 13-294

O-107 11:45 AM Tuesday, October 19, 2021

RACIAL DISPARITIES IN ACCESS TO INFERTILITY CARE IN A STATE WITH MANDATED INFERTILITY COVERAGE. Ann Korkidakis, M.D., M.P.H., 1 Kim L. Thornton, MD, 2 Angela Q. Leung, M.D., 1 Jaimin S. Shah, M.D., 1 Brianna Amaral, BSc, 1 Alan S. Penzias, M.D. 1 Boston IVF, Waltham, MA; 2 Boston IVF, Waltham, MA; 3 Beth Israel Deaconess Medical Center, Boston, MA.

OBJECTIVE: To investigate how race affects access to infertility care in a state with comprehensive, mandated insurance coverage for infertility services.

MATERIALS AND METHODS: All women seen in consult with a diagnosis of infertility at a large, academic affiliated center from January 2010 to December 2020 were included in the study. Patient age, partner age, marital status, and length of infertility at the time of initial consult were collected. Treatment utilization was determined by whether a patient underwent one or more intrauterine insemination (IUI) and/or in vitro fertilization (IVF) cycles. Race was categorized according to the U.S. Census Bureau standards which requires five minimum categories for race: “American Indian or Alaskan Native”, “Asian”, “Black”, “Native Hawaiian or Other Pacific Islander”, and “White”. Patients selecting more than one race were classified as “Two or more races”. Missing racial demographics were imputed from parental ancestry when available and patients were excluded if direct imputation was not possible. Access to care variables were compared between the racial groups using chi-square and t-test for parametric categorical and continuous variables, respectively.

RESULTS: A total of 20,774 women met the study criteria of which 964 (4.6%) were Black, 26 (0.1%) American Indian or Alaskan Native, 2,491 (12.0%) Asian, 13 (0.1%) Native Hawaiian or Other Pacific Islander, 17,098 (82.3%) White and 182 (0.9%) Two or more races. At the time of initial consult, Black women were older (36.3 vs. 34.9 years old, p < 0.001) and had a longer duration of infertility (21.8 months vs. 18.2 months, p < 0.001) as compared to White women. Additionally, Black women were more likely to self-pay for services (relative risk (RR) 3.0, 95% CI 2.3–3.9), and they used infertility treatment less frequently (RR 0.73, 95%CI 0.67-0.80 for IVF). There was no significant increase in consults among Black women over the study period (p = 0.903). In contrast, the proportion of women presenting to care who identify as two or more races has increased over time (p < 0.001). This group is still less likely to pursue infertility treatment compared to White women (RR 0.77, 95% CI 0.63-0.95 for IVF). The proportion of Asian women presenting to care has increased over time (p = 0.003) however there remains a greater delay to infertility consult as compared to White women (19.9 vs. 18.2 months trying to conceive, p < 0.001).

CONCLUSIONS: Race impacts patient age and infertility duration at the time of initial infertility consult, as well as access to consultations and infertility treatment utilization. These inequities are particularly pronounced in Black women and in women who identify with two or more races. The collection of accurate, standardized race and ethnicity...