Alcohol, DES Exposure Tied to Risk for Fibroids

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BETHESDA, MD. — Alcohol, diethylstilbestrol exposure, and family history are potential risk factors for fibroids, several recent studies have found. The results were presented at an international conference on uterine leiomyoma research, sponsored by the National Institutes of Health.

Data from one study of nearly 1,500 women conducted by the National Institute of Environmental Health Sciences identified prenatal diethylstilbestrol (DES) exposure and young age at menarche as fibroid risk factors. The study's purpose was to explore the epidemiology of fibroids by examining hormonal, inflammatory, and metabolic risk factors, reported Donna Day Baird, Ph.D.

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Dr. Baird, a senior epidemiologist with the NIEHS, and her colleagues used data from the Nurses' Health Study and the Black Women's Health Study to identify a random sample of 1,482 pre- and postmenopausal women (aged 39-49 years) who had fibroids. The presence of fibroids was confirmed by ultrasound (73%), surgery (6%), or self-reports (21%).

Results from the study supported previously known fibroid risk factors of African American ethnicity and age older than 35 years. Approximately half the African American women had been diagnosed with fibroids before enrolling in the study. Among all the women without a previous diagnosis, fibroids also were more common among African American women, especially among the younger age groups.

In a logistic regression analysis, the cumulative incidence of fibroids among black women was 60% at age 35 years and 80% by the age of menopause. Among white women, the incidence was less than 40% at age 35 years and almost 70% by the age of menopause.

Prenatal exposure to DES was significantly associated with the presence of fibroids, Dr. Baird said.

The women in the study all had the potential for DES exposure, since they were born during the time when DES was used as potential therapy for problem pregnancies. The exposure data were based on self-reports, categorized as "yes," "no," and "maybe." Five black women reported definite exposure, and all five had fibroids, as did 14 of 19 white women who reported exposure. "Adjusting for age, there is a significant association between DES exposure and the development of fibroids, and it is stronger for large fibroids than for small fibroids," Dr. Baird said.

Overall, 26% of the women who reported definite DES exposure had fibroids that were at least 4 cm, compared with 20% of those who reported possible exposure and 15% of those who reported no exposure. This association remained statistically significant after controlling for several factors, including age at menarche, BMI, parity, and maternal history of fibroids.

An examination of other hormonal and reproductive factors showed that an older age of menarche was protective in both blacks and whites, with adjusted odds ratios of 0.8 for both races.

As for metabolism-related factors, body mass index was related to increased risk among blacks, but not whites, and exercise was protective regardless of race.

Factors that were not significantly associated with fibroids in the study population included infertility, breast-feeding, oral contraceptive use, IUD use, caffeine use, and smoking.

A poster presented at the meeting by Aimee A. D'Aloisi of the University of North Carolina, Chapel Hill, and associates used data on 1,324 women from Dr. Baird's NIEHS data set to assess alcohol consumption as a risk factor for fibroids.

Alcohol exposure was based on patient interviews and self-reports of alcohol intake at age 30 years. Based on the Bayesian method of assessing tumor incidence followed by growth, an increased number of drinks consumed weekly was strongly associated with an increased incidence of uterine fibroids (Bayes factor 244), but only minimally associated with an increase in tumor growth (Bayes factor 1.8). The increase in incidence was evident even among women who reported as few as 0.5-2 drinks weekly.

Among black women, a strong association appeared between increasing incidence of fibroids and increasing number of drinks weekly (Bayes factor 15). However, the increased incidence of fibroids among black women occurred primarily among those who reported consuming seven or more drinks weekly, rather than among those who reported a lower weekly alcohol intake. The association between increased alcohol consumption and tumor growth was only slightly higher among black women compared with the overall cohort (Bayes factor 3.9). Overall, the results suggest that alcohol intake may be involved in the onset, but not necessarily the progression, of uterine fibroids.

Data from a separate study indicated that having a mother who had fibroids was highly predictive of fibroids in her daughter. In a regression analysis of 400 fibroid patients and 146 controls aged 25-64 years, the odds ratio for fibroids was 6.8 in daughters of mothers with fibroids, wrote Kristen Kjerulff, Ph.D., of Pennsylvania State University, and colleagues, in a poster presented at the meeting.

The association between a daughter's development of fibroids if her mother had them was highly significant after controlling for factors such as age, race, years of oral contraceptive use and smoking status. ■