DES Action VOICE

A FOCUS ON DIETHYLSTILBESTROL

SPRING 2005 #104

DES Daughters At Increased Risk For Endometriosis

"In utero exposures and the incidence of endometriosis" by Stacy A. Missmer et al, Fertility and Sterility, Vol. 82, No. 6, December 2004.

Reviewed by Sally Keely, M.S.

This prospective cohort study shows a link between in utero diethylstilbestrol (DES) exposure and the incidence of endometriosis. Endometriosis is a painful chronic disease occurring when endometrial tissue is found outside the uterus. This misplaced tissue develops into growths or lesions that respond to the menstrual cycle in the same way that the tissue of the uterine lining does — each month it builds up, breaks down, and sheds. The blood and tissue shed from endometrial growths has no way of leaving the body resulting in internal bleeding and inflammation that can cause pain and infertility.

DES exposed persons have altered estrogen receptors and an increased risk of autoimmune disorders. These factors are associated with endometriosis. It has been suspected therefore that DES Daughters are at increased risk of endometriosis. This study confirms it.

"... the relation between DES exposure and endometriosis may result from a combined effect of increased retrograde menstruation, immune dysfunction, and exogenous estrogen exposure."

Participants in the Nurses' Health Study II (NHSII) which began in 1989 and spanned ten years of follow-up included over 84,000 female nurses aged 25-42 who had (at baseline in 1989) never been diagnosed with endometriosis, infertility, or cancer. Data were collected regarding their in utero environment (including DES exposure) and birth/newborn data.

During the study 1226 cases of incidence of laparoscopically confirmed endometriosis were compared according to birth weight, prematurity, multiple gestation, DES exposure and,

continued on page 3

In utero DES exposed persons have altered estrogen receptors and an increased risk of autoimmune disorders. These factors are associated with endometriosis.

We know that DES Daughters are more likely to present with anatomical complications such as cervical stenosis (narrowing of the cervical canal, sometimes to the point of closure) that may increase the likelihood of retrograde menstruation. In utero

Endometriosis *continued from page 1*

having been breast-fed. The following findings interested me.

(1) The incidence of endometriosis increased linearly as birth weight decreased (under 5.5 pounds).

(2) Women who were born as a multiple were at increased risk even after controlling for birth weight.

And most importantly to us,

(3) The rate of endometriosis was **80% greater** among women exposed to DES in utero.

That is close to double the incidence of endometriosis among DES Daughters and it was even greater among Daughters with concurrent infertility.

Further analysis of the affected DES exposed cases showed, "the trimester of initial DES exposure did not affect the rate of endometriosis, but that any DES exposure of five or more weeks nearly tripled the rate compared to those exposed for less than five weeks."

As a mathematician I find this study to be very well conducted. The researchers were exclusive rather than inclusive. So although the number of confirmed DES exposed participants with endometriosis was small (21 cases), this study shows a significant link between in utero DES exposure and endometriosis. The results are statistically sound, and for DES Daughters extremely important!

I look forward to discussing this study with you online in the new DES Action DES-Daughters listserv! For more information about endometriosis, please visit the Endometriosis Association at www.endometriosisassn.org.