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Abortion & Breast Cancer

The protective effect of a full-term pregnancy on breast cancer risk has been known since the Middle Ages when it was noted that nuns had a higher risk of breast cancer than women with children. Medical authorities agree that a full-term pregnancy lowers a woman's risk of breast cancer.[1] Each additional pregnancy further lowers her risk by 10%. For each year after age 20, a woman who delays a full-term pregnancy increases her risk of premenopausal breast cancer by 5% per year, and postmenopausal breast cancer by 3% per year. These facts are not controversial and are acknowledged by all medical organizations.

Background

If a woman finds herself facing an unplanned pregnancy, she should be aware that if she chooses to continue her pregnancy and has a full-term pregnancy or one that lasts at least 32 weeks, she will lower her risk of breast cancer. Or, if she chooses to end her pregnancy with an induced abortion, she will necessarily have an increased risk of breast cancer because of three factors: 1) She will lose the benefit of a full-term pregnancy at her current age. 2) She will delay a full-term pregnancy until an older age or have fewer or no full-term pregnancies. 3) She may also have a premature delivery before 32 weeks in a subsequent pregnancy due to increased risk of preterm delivery after abortion. These effects are all independent of whether there is a direct cancer-promoting effect caused by the induced abortion.

An understanding of histologic changes in a woman's breast tissue can clarify the etiology of how induced abortion may additionally contribute to an elevated risk of breast cancer. A lobule is a unit of breast tissue comprised of a milk duct with surrounding mammary (milk) glands which are composed of individual breast cells. There are four types of breast lobules with varying oncogenic potential. Breast tissue made of type 1 and 2 lobules is vulnerable to producing cancer. 99% of breast cancers arise from type 1 and 2 lobules (85% type 1[ductal cancer], 10-15% type 2 [lobular cancer]). Type 3 and 4 lobules are cancer resistant. Their ability to multiply has been turned off (terminal differentiation). In rat studies, 80% of post-

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abortive rats develop breast cancer when exposed to a carcinogen.[2]

From birth until puberty, the female breast is composed of a small amount of type 1 lobules. When a young woman enters puberty, the breasts become composed of a larger amount of type 1 lobules (75%) and type 2 lobules (25%) which mature under the cyclic influence of the female hormones, estrogen and progesterone, during menstrual cycles.

During the first half of pregnancy, the breast volume doubles by increasing the amount of type 1 and 2 lobules, producing many estrogen and progesterone receptors with a high DNA turnover (proliferation phase). These changes are hormonally mediated by human chorionic gonadotropin (HCG) produced by the fetal placental unit which stimulates the ovaries to produce estrogen and progesterone within a few days after conception. This rapid growth is the cause of breast tenderness in early pregnancy.

If a woman miscarries in the first trimester, often her body does not produce as much estrogen. Many women who miscarry early in pregnancy report that they did not feel pregnant. First trimester miscarriages cause minimal increase in type 1 and 2 lobules, so it is not likely that first trimester miscarriages will increase the risk of breast cancer.[3]

In the second half of pregnancy, maturation progresses to type 4 lobules, which have fewer estrogen and progesterone receptors (differentiation phase). These changes are hormonally mediated by human placental lactogen, which sharply rises during the second half of pregnancy, inducing maturation. By week 32, more than half of the type 1 and 2 lobules have been converted into type 4 lobules. So, reaching at least 32 weeks begins to protect a woman's breasts from cancer. By week 40, 70-90% of type 1 and 2 lobules have been converted into type 4 lobules, which make milk. Breast tissue which has been made capable of making milk very rarely makes cancer.[4]

By delivery, 70-90% of the breast lobules are type 4 lobules. Type 3 lobules predominate after weaning as type 4 lobules regress. These have permanent epigenetic changes that protect against cancer. After the first term pregnancy, especially if she breastfeeds, a woman's breasts are relatively protected from cancer, as compared to a woman who has never had a term pregnancy. Loss of pregnancies after the first term pregnancy do not increase a woman's risk as much as losses before a first term pregnancy. So, the risk factors for breast cancer become easy to understand: the longer a woman's breast is composed of mostly type 1 and 2 lobules, the higher a woman's risk of breast cancer.

After menopause, type 3 lobules change morphologically into what appear to be type 1 lobules; however, their genes do not change in up or down regulation, so risk reduction is maintained.

What does the research show?

From 1957 to 2018, there were 76 studies differentiating induced from spontaneous abortion. 60 studies showed a positive association of increasing breast cancer risk, and 36 of these studies were statistically significant to the 95th percentile.[5] A summary of these studies can be found on the Breast Cancer Prevention Institute website.

What are some common problems with abortion-breast cancer (ABC) research?

1. Incomplete questionnaires: in one study, over half of the respondents did not complete the section on abortion history. So, the authors filled in "no abortion" for those questionnaires.
2. Many studies excluded women with early "in situ" breast cancer and excluded women who had a history of breast cancer but did not have breast cancer currently.
3. Wrong time frame: It takes 8-10 years for a breast cancer cell to grow enough to become clinically detectable. Many studies followed women for less than ten years after the abortion.
4. Wrong pregnancy sequence: Abortion of a pregnancy after the first term pregnancy does not have the same effect, since 70-90% of the breast tissue has already matured to type 4 lobules. Some studies do not differentiate primiparous vs. multiparous abortions.
5. Wrong comparison group: The appropriate comparison groups are women who abort vs. women who give birth. Some studies compared aborting women to women who were never pregnant.
6. Wrong definition of abortion: Some studies included women who had first trimester spontaneous abortion mixed into their population of women who "aborted."
7. Poor databases: Some studies have demonstrated incomplete collection of all abortions.
8. Retrospective studies are often rejected due to the possibility of "recall bias" leading to inconsistent reporting of past abortions by women. It is postulated that the shame many women feel about a prior abortion may lead them not to volunteer this information to a researcher in the absence of an illness, whereas guilt may lead them to confess this history in the presence of a disease such as breast cancer.

   While the underreporting of historical abortions is widely documented, the assumption that there is a significant difference in this reporting between women with an illness such as breast cancer compared to healthy controls that would invalidate retrospective study results has not been well documented. The study most often invoked to show the existence of the problem does not actually show what abortion advocates say it does. The Lindefors-Harris study compared the information found in computer registries of abortions and the information given by women during interviews, assuming the computer information was correct. The researchers reported discrepancies where some women reported more abortions that were listed in records linkage, and they concluded that women were "over-reporting" abortions that they didn't have. It is counterintuitive that women would falsely confess to an abortion, and the most likely explanation is that the data bank was incomplete. This study also found that women with cancer and without cancer both underreported their abortions in similar percentages. 21% (5

of 24 women with cancer) and 27% (16 of 59 women without cancer) underreported documented abortions, a difference of only 6%.[6] Nevertheless, this premise of "recall bias" has been used as an "excuse" to invalidate many retrospective interview studies of abortion complications.

Brief historical overview of ABC research

The recent report from the National Academy of Sciences (NAS),[7] funded by the Packard, Buffett, and Hewlett Foundations—three of the top international funders of abortion advocacy[8]—included that abortion has no long-term adverse effects and it specifically does not increase the risk of preterm delivery, mental health disorders, or breast cancer. In order to reach this conclusion regarding abortion and breast cancer, the NAS authors relied on only three studies out of a total of 75 existing peer-reviewed studies on the subject of induced abortion and breast cancer. Of the 73 rejected studies, 60 showed a positive association, 36 of which were statistically significant to the 95th percentile. The NAS authors excluded all studies that included interviews due to the undocumented assumption of "recall bias" as described earlier. The NAS authors' stated selection criteria included only record linked studies in order to control for other variables. However, all three included studies admitted incomplete records and two of the three lacked control variables.

2000 Newcomb study

In the Newcomb study, there were only 23 women with a history of abortions out of a total 128 cases of breast cancer in the study. This very small sample greatly weakened the study. The authors remarked, "However, both cases and controls could have had procedures outside of the GHC system or could have elected to withhold information on prior abortion from their medical care provider." There were no time frames given for when cancer occurred in relation to the abortion. An abortion could have occurred one year, one month, or a day before the cancer diagnosis. It takes 8-10 years for one cancer cell to become a detectable 1 cm tumor, so follow-up time post-abortion is important to know. The authors also remarked, "Some limitations of this study should be considered in interpreting our results."[9]

2001 Goldacre study

The Goldacre study appears strong at first glance because it involved a very large number of women (over 350,000), over 28,000 of whom had developed breast cancer, and it relied entirely upon medical records of abortion from the U.K. National Health Service hospital records. The results showed a statistically significant 17% decrease in breast cancer risk among women who had prior induced abortions. However, many missing abortion records resulted in the misclassification of 90% of abortion-positive women as abortion-negative. This could be quite easily determined, as the study was based on all the women who had been admitted to NHS hospitals in the Oxford area for any reason. A simple perusal of statistics on induced abortion in the United Kingdom reveals that at least 15% of U.K. women were abortion-positive, yet the records upon which the Goldacre study relied indicated that only just over 1% of the cancer patients—300 of them, to be exact—had an induced abortion

on record. The researchers acknowledged this: "Our data on abortions are substantially incomplete because they only include women admitted to the hospital, only include those in the care of the National Health Service, and only in the time and area covered by the study." In fact, most abortions are done as outpatient surgery and not in a hospital. This massive gap in the database rendered the results in this population statistically meaningless.[10]

2005 Brewster study

The Brewster study included all reproductive events occurring from 1981 onwards and some reproductive events occurring before 1981, but the number of pregnancies in the pre-1981 group equaled the number of births, so there were no miscarriages or induced abortions recorded before 1981. Age at first birth was unknown for this group. They also combined non-aborting nulliparous women (who generally have higher breast cancer risk) and non-aborting parous women (who generally have a lower breast cancer risk). This would produce a non-aborting cohort with a breast cancer risk elevated over that of the ideal reference group (women who were pregnant and gave birth vs. women who got pregnant and had an abortion). This elevated risk would mute the risk associated with abortion, by comparison. The authors reported: "The important weakness of the study relates to missing data on miscarriage and induced abortion status and potential confounding factors for a substantial proportion of the original study population."[11]

Brief historical review of important studies

1994 Daling study

The Daling study is important for the strong correlation between abortion and breast cancer that it demonstrated. 845 women with breast cancer were identified through the tumor registry of NCI. There were 961 matched controls of women without breast cancer. They found that the highest risks were observed when the abortion was done at ages younger than 18 years—particularly if it took place after 8 weeks gestation—or at 30 years of age or older. Among women who had been pregnant at least once, the risk of breast cancer in those who had experienced an induced abortion was 50% higher than among other women by age 45. Teenagers under age 18 and women over 29 years of age who procured an abortion increased their breast cancer risk by more than 100% by age 45. Teenagers with a family history of breast cancer who procured an abortion faced a risk of breast cancer that was incalculably high. All 12 women in the study with this history were diagnosed with breast cancer by the age of 45.[12]

Interestingly, the same journal included an editorial which sandbagged the Daling study, concluding—among other things—that "the overall results as well as the particulars are far from conclusive, and it is difficult to see how they will be informative to the public."[13]

1996 Brind meta-analysis

In 1996, a narrative review and quantitative compilation of all 23 published studies available at that time found a statistically significant overall 30% increase in the risk of breast cancer among women who had an induced abortion, and no significant link with spontaneous abortion.[14]

1997 Melbye study

The Melbye study included a large database of 1.5 million Danish women born over more than 50 years. The study concluded that there was not an association between abortion and breast cancer. However, a closer investigation demonstrates glaring data deficiencies. Although the study gathered data from women born from 1935-1978, it only reported abortions after 1973, when abortion was widely legalized in Denmark, even though abortion had been permitted for a wide variety of indications for many years prior to this time. Thus, they excluded the abortions of the 60,000 oldest women, with the most cases of breast cancer, from their computations. In addition, they included breast cancer diagnoses starting from 1968, violating the fundamental scientific rule that cause must precede effect. Even with all the incorrect statistical manipulation, women who had late abortions after 18 weeks gestation were found to have double the risk of breast cancer.[15]

2000 Sanderson and 2002 Ye studies

Two large studies from China showed no effect of induced abortion on breast cancer risk,[16,17] but there is an important caveat to understand about the women in that country. In China, abortion is extremely common (50% of women are estimated to have abortions), and most women have abortions after the birth of their first, and usually only child (compared to the U.S., where most abortions are performed prior to the first term birth). For reasons that were previously mentioned, the breast cancer risk would be expected to be higher in women who aborted before a term birth because the breasts have not yet undergone the transformation into mature, differentiated, cancer-resistant cells, so China's population might not necessarily reflect this increased risk.

2003 Erlandsson study

The Erlandsson study also ran into misclassification problems resulting from huge gaps in the database. The subjects were all Swedish women who had had at least one live birth during the study period because in Sweden, a record is automatically created at an antenatal interview. In the antenatal record, each women gives a detailed history, including any abortions. The registry of antenatal record data was linked by Erlandsson to the breast cancer registry, in order to find any connection between induced abortion and breast cancer. Erlandsson found a 20% decrease in risk of breast cancer with women who had had abortions, with a borderline significance to that decrease. The problem here is that the typical pattern of induced abortion in Sweden is more like that in China than in the United States or the United Kingdom; that is, abortion is used more often to limit family size than to delay first childbirth. Therefore, most of the induced abortions in the study population happened sometime between the antenatal interview (when all the abortion data were collected) and the time of breast cancer diagnosis, and were therefore missing from the record. Here again, we find a database which is simply unsuitable for obtaining a valid result regarding the ABC link, because most of the women who had an induced abortion were misclassified as not having had one.[18]

2004 Beral study

Another widely quoted study by Dr. Beral with the Oxford Collaborative Group on Hormonal Risk Factors professed to perform a re-analysis of 53 epidemiological studies. However, closer analysis reveals invalid statistical manipulation. From the total of 41 studies existing in the published literature, they excluded 17 published studies. Two of the excluded studies were excluded for appropriate scientific reasons, but 11 of the studies were excluded for entirely unscientific reasons, specifically, that "principal investigators... could not be traced," or "original data could not be retrieved," or "researchers declined to take part in the collaboration," or "principal investigators judged their own information on induced abortion to be unreliable." Four other studies were excluded by simple omission, without any mention at all. A compilation of all 15 excluded studies reveals an overall 80% risk increase among them.

In addition, the authors added data from 28 studies that were unpublished and thus not subject to peer review.

Moreover, the authors included the large prospective studies of the Melbye, Goldacre, and Erlandsson groups, studies which—as discussed above—should have been excluded on purely scientific grounds.

In addition, Beral et al. used as their control group women who had never been pregnant. That is an inappropriate control group because a woman facing an abortion no longer has the option of never having been pregnant. The appropriate comparison group would be women who carried the unintended pregnancy to term, who would have a lower risk of breast cancer for the reasons defined above.[19]

Inferring causality from scientific studies

How does one scientifically determine whether an event is causative or merely associated with another event? Most scientists will acknowledge a cause and effect relationship if the events meet the Bradford-Hill Criteria for causation. This test was used in 1964 by the U.S. Surgeon General to determine causality of cigarettes in lung cancer promotion. These same criteria have been fulfilled by the world's epidemiologic studies of the abortion breast cancer link.

Bradford-Hill Criteria for drawing a causal inference from an epidemiological association:[20]

1. Timing – the patient must be exposed to the risk before the cancer.
2. Similar findings in many studies – 60/76 studies worldwide, 19/24 in the U.S. associate abortion with breast cancer.
3. Statistically significant increases in risk – 36 studies worldwide, 9 U.S. are significant.
4. Dose effect – the risk should become higher with more exposure to the risk. The longer the pregnancy before abortion, or the more abortions, the higher the risk. (1994 Daling study. 1997 Melbye study.)
5. A large effect observed (RR>3) – the Daling study for subgroups of teens, over 30 and those with family history
6. Causal association is biologically plausible – elevated estrogen levels in pregnancy leave the breast with increased

numbers of type 1 and 2 lobules where cancers form without the benefit of full maturation to cancer-resistant type 3 lobules.

7. Experimental studies – 1980 Russo and Russo study on virgin, aborted, and parous rates.
8. Coherence – natural history and biology of breast cancer; breast cancers caused by abortion are found after 8-14 years and average cancer cell growth takes 8-10 years to be clinically detectable.
9. Analogy – similar exposures associated with similar effects. Premature delivery before 32 weeks doubles breast cancer risk.

Conclusion

In summary, there is a biologically plausible mechanism for breast cancer promotion caused by electively terminating a normal pregnancy. Notwithstanding the deliberate obscuring of the data by ideologically pro-choice medical organizations, a close investigation of the available studies demonstrates that many show a statistically significant increase in risk of breast cancer after elective abortion. An abortion-breast cancer link passes every one of the nine Bradford-Hill Criteria for causation. Abortion is difficult to research because it is not possible or ethical to perform the gold-standard, randomized, double-blinded, placebo-controlled study, and admittedly some studies are not well-designed, but an honest review of the literature prompts a call for more study, rather than definitive pronouncements of "no link."

America was not content to blindly follow when the tobacco industry denied a link between tobacco and lung cancer based on its own studies. Neither should we fail to question when those who profit from abortion provision tell us that there is no possibility of induced abortion increasing the risk of breast cancer. With a one in eight lifetime risk of breast cancer in American women (of whom one in four have had an induced abortion, we must be willing to follow the information where it leads, for the good of women and society. Ethical medical practice obligates a physician to counsel a woman considering abortion that this decision may increase the risk of breast cancer later in life.

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