Chapter 3

Induced Abortion and Other Cancers

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It is difficult to draw definitive conclusions regarding possible links between induced abortion and a higher risk of cancer because spontaneous and induced abortions are frequently not separated in the literature. In addition, inconsistencies exist between studies and from country to country. There have been a number of studies done in the past twenty years, however, that indicate an increased risk of cervical and ovarian cancer when there has been a history of previous abortion(s). Women who have had more than one previous abortion seem particularly to be at a higher risk of ovarian cancer, while research indicates that childbirth provides women with protection from cancers of the reproductive system. A higher incidence of rectal cancer also seems to be related to induced abortion, though further research is needed to study this connection.

The link between induced abortion and breast cancer is particularly important, and is explored in Chapter 2.

Induced Abortion and Other Cancers

Spontaneous and induced abortion are often not separated in the literature which makes it difficult to draw conclusions. Inconsistency between studies and from country to country compounds the problem. But a history of previous induced abortion may play a role in cancers such as uterine, cervical, colorectal, endometrial, and breast. (The relationship of abortion to breast cancer is discussed in Chapter 2.)

Cancers of the Reproductive System

Cancer of the cervix (the entrance of a woman's uterus) was found to be increased in Australian women with a history of previous induced abortion.[1] After researchers adjusted for other possible causes, no statistically significant link was found, although there was a trend towards an increased cancer risk in women who had undergone two or more abortions. La Vecchia and colleagues isolated a cervical cancer risk following one induced abortion and reported that "...cervical cancer was directly associated with induced abortions".[2] In another study, Schwartz and colleagues found a significant relationship between *leiomyosarcoma* and a history of induced abortion.[3]

Studies of cancer of the ovary have presented conflicting evidence regarding a possible association with induced abortion. As late as 1990 Larissa Remennick commented in the *Journal of Epidemiology and Community Health* that the possible influence of abortion on ovarian cancer had hardly ever been examined.[4] Yet in 1995 Bernal and colleagues reported that "ovarian cancer cases show important fetal loss".[5] With four abortions, the *relative risk* rose to 3.66 – meaning a 266 per cent increased risk. Regrettably, the study made no distinction between spontaneous and induced abortions. A year later Chen and colleagues determined that incomplete pregnancies, including abortions, do not provide women with the protective effect of full-term pregnancies against the onset of ovarian cancer.[6] This is significant, because the risk of developing ovarian cancer has been shown to decrease with the number of full-term pregnancies.[7] Finally, Albrektsen and colleagues have determined that childbirth furnishes protection against

cancers of the reproductive system, thanks to "a mechanical shed of malignant or pre-malignant cells at each delivery".[8] Such protection is not found in pregnancies ended by induced abortion.

McPherson and colleagues found that for ovarian cancer "a history of ever (versus never) having had an induced abortion was a factor that remained statistically significant." The increase in risk is 150 per cent (relative risk = 2.5). They also determined that the time of a spontaneous abortion in a woman's life was also significant – "a miscarriage late in reproductive life followed by lack of a subsequent full-term pregnancy" is a risk factor for ovarian cancer. It is unfortunate that they provide no discussion of the sequence of pregnancy interruptions because induced abortion is known to contribute to later spontaneous abortions. If a consistent pattern turned out to be, for instance: 1) induced abortion of first pregnancy; 2) subsequent spontaneous abortions; 3) ovarian cancer, the finding would be significant.

Colorectal Cancer

Kvale and Heuch report that "having had many abortions was associated with high risk of colorectal cancer of all subsites. However, the association was statistically significant for rectal cancer only",[10] where the relative odds were found to be 1.72, in other words 72 per cent higher than among women who had had no abortions.

These researchers go on to suggest that "international correlational studies have demonstrated a positive relationship between the incidence of colorectal cancer and that of breast cancer and women with breast cancer are at increased risk of developing a second primary cancer of the colon...this suggests that colon and breast cancer have, at least in part, a common etiology".[11] Given the established link between abortion and breast cancer discussed in Chapter 2, and given that colorectal cancer and breast cancer share some common causes or triggers, then induced abortion may prove to be a common risk factor for both cancers even though Kvale and Heuch assert that "the results have not been consistent" with regard to reproductive factors in the etiology of colorectal cancer.[12]

Conclusion

At present, research indicates that after an induced abortion (and especially after more than one abortion), there is an apparent higher risk of contracting cervical, ovarian, or rectal cancer, though the exact links are inconclusive. Researchers have found that a full-term pregnancy resulting in childbirth seems to provide a protective effect for women against cancers of the reproductive system. It is remarkable that with the increase in cancers of the reproductive system in women – and the very serious threat these cancers pose to their health and longevity – there is so little agreement on whether or not induced abortion(s) increase women's risk of cancer. As in other areas of the effects of abortion on women's health, more objective studies are needed.

Key Points Chapter 3

- A history of previous induced abortion(s) may play a role in cancers of the reproductive system and rectal cancers.

- Inconsistencies between studies and countries where the studies are done, in addition to the fact that in the literature, spontaneous and induced abortions are often not separated, make it difficult to draw definitive conclusions.

- Recent studies have connected a higher risk of cervical and ovarian cancers to previous abortions, though the degree of risk varies from study to study.

- A consistent finding has been the protective effect of full-term pregnancies against the onset of cancers of the reproductive system.

- Researchers have found a connection between abortion and rectal cancer.

- With reproductive and rectal cancers on the increase in women, more studies are needed, specifically to examine the connection between abortion and cancer.

Notes

1 Brock KE, Berry G, Brinton LA, Kerr C, MacLennan R, Mock PA, et al. Sexual, reproductive and contraceptive risk factors for carcinoma-in-situ of the uterine cervix in Sydney. Medical Journal of Australia 1989 February 6;150(3):125-30.

2 La Vecchia C, Negri E, Franceschi S, Parazzini F. Long-term impact of reproductive factors on cancer risk. International Journal of Cancer 1993 January 21;53(2):215-9, p. 217.

3 Schwartz SM, Weiss NS, Daling JR, Newcomb PA, Liff JM, Gammon MD, et al. Incidence of histologic types of uterine sarcoma in relation to menstrual and reproductive history. International Journal of Cancer 1991 September 30;49(3):362-7.

4 Remennick LI. Induced abortion as cancer risk factor: a review of epidemiological evidence. Journal of Epidemiology and Community Health 1990 December;44(4):259-64, p. 262.

5 Bernal A, Mendez-Moran L, Fajardo-Gutierrez A, Gonzalez-Lira G, Escudero P, Ortiz H. Univariate and multivariate analysis of risk factors for ovarian cancer: case-control study, Mexico City. Archives of Medical Research 1995, Autumn;26(3):245-9.

6 Chen MT, Cook LS, Daling JR, Weiss NS. Incomplete pregnancies and risk of ovarian cancer (Washington, United States). Cancer Causes and Control 1996 July 7;7(4):415-20.

7 Whittemore AS, Harris R, Itnyre J. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 US case-control studies. II. Invasive epithelial ovarian cancers in white women. Collaborative Ovarian Cancer Group. American Journal of Epidemiology 1992 November 15;136(10):1184-203.

8 Albrektsen G, Heuch I, Tretli S, Kvale G. Is the risk of cancer of the corpus uteri reduced by a recent pregnancy? A prospective study of 765,756 Norwegian women. International Journal of Cancer 1995 May 16;61(4):485-90, p.485.

9 McPherson CP, Sellers TA, Potter JD, Bostick RM, Folsom AR. Reproductive factors and risk of endometrical cancer. The Iowa Women's Health Study. American Journal of Epidemiology 1996 June 5;143(12):1195-202, p. 1195.

10 Kvale G, Heuch I. Is the incidence of colorectal cancer related to reproduction? A prospective study of 63,000 women. International Journal of Cancer 1991 February 1;47(3):390-5, p. 392.

11 Kvale 1991. See n. 10, p. 390.

12 Kvale 1991. See n. 10, p. 390.