WOMEN'S HEALTH AND ABORTION
II. RISK OF PREMATURE DEATH IN WOMEN FROM
INDUCED ABORTION: PRELIMINARY FINDINGS

INTRODUCTION

A major factor in the abortion issue that has received very little attention is the increased likelihood of premature death due to the detrimental health effects of abortion. Induced abortion is a direct cause of alcohol and drug abuse in a substantial number of women which may result in early death. It also is a risk factor and is likely to be a direct cause for increased smoking rates in women. Deaths of U.S. women attributable to smoking exceed 100,000 annually. Induced abortion, particularly of the first pregnancy, eliminates or reduces the protective effects of early childbirth. This increases the risk and likelihood of breast, ovarian, endometrial and possibly other cancers.

CIGARETTE SMOKING

Induced abortion, including legalized abortion, is a risk factor for smoking in women. A study of women patients entering Boston Hospital for Women during 1976-78 found that 31.7% smoked if there was no history of abortion compared to 40.3% (one abortion) or 51.7% (two or more abortions).1 A large scale study conducted by the World Health Organization on Arab and Jewish women found that among current smokers, 12.3% reported a prior induced abortion compared to only 6.3% among women who had never smoked.2 A Swedish study conducted during 1970-78 found that 37% of women reporting prior abortion smoked 10 or more cigarettes per day compared to only 21.1% for parity matched controls and 18.9% for Swedish women generally. The Swedish study also reported that women who had prior abortions were more often teenagers and unmarried at a subsequent delivery than controls, and were also more likely to be smoking during pregnancy.3

Induced abortion appears to be a direct cause of increased smoking in women

The results of these earlier studies have been recently confirmed in a study of 6541 white women in the major urban counties of Washington state who delivered during 1984-87. Among women with no abortion history only 18.0% smoked during pregnancy compared with 28.1%(one abortion) or 41.6% (four or more abortions).4 The mean average smoking rate during pregnancy for women with a history of one or more abortions was 30%. This is significantly higher than the results of a 1989
TABLE 1
IMPACT OF SMOKING ATTRIBUTABLE TO INDUCED ABORTION ON MORTALITY OF U. S. WOMEN IN A SINGLE YEAR

<table>
<thead>
<tr>
<th>Percent Smoking Increase</th>
<th>Annual Number of Women Who Would Begin to Smoke</th>
<th>Annual Number of Women Who Would Have Lung Cancer</th>
<th>Estimated Annual Number of Premature Deaths From Smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lung Cancer Alone</td>
</tr>
<tr>
<td>2%</td>
<td>31,180</td>
<td>4,310</td>
<td>3,750</td>
</tr>
<tr>
<td>5%</td>
<td>77,950</td>
<td>10,780</td>
<td>9,380</td>
</tr>
<tr>
<td>10%</td>
<td>155,900</td>
<td>21,560</td>
<td>18,760</td>
</tr>
<tr>
<td>15%</td>
<td>233,860</td>
<td>32,240</td>
<td>28,135</td>
</tr>
</tbody>
</table>

Sources: Abortion Statistics, Alan Guttmacher Institute, 1987
Cancer Facts & Figures - 1993, American Cancer Society
Lung Cancer and Smoking Trends in the United States, May/June 1991
Smoking - Attributable Mortality and Years of Potential Life Lost, CDC, 1984

Centers for Disease Control (CDC) national survey reporting that only 19% of U.S. women smoke during pregnancy. The CDC survey also found that 64% of women will continue to smoke during pregnancy. If this figure is applied to the women who smoked with a history of abortion, then the weighted average smoking rate of the Washington state women when they were not pregnant is approximately 47%. This figure is very similar to the weighted average smoking rate of 43.5% for non-pregnant women with a history of abortion who entered the Boston Hospital for Women during 1976-78.

This figure of 43.5%-47% is significantly higher than the 30% figure for U.S. women in general which was reported in 1989 by the CDC. The difference might be thought to be accounted for from the differences in personality characteristics and habits of women who seek abortion and not from the effects of abortion itself. However, it appears that personality characteristics of women who may obtain abortions because they have an “unwanted” pregnancy does not account for a major portion of the difference. A British study found that attitude toward pregnancy is a factor in smoking rates among women. Among women who said they wanted to be pregnant 30.3% were smokers, while 36.8% smoked when they said they did not want to be pregnant.

There is other evidence that induced abortion is a major direct or indirect factor in smoking. It is known that women frequently smoke for emotional reasons to attempt to relieve depression or anxiety or as an attempt to cope with stress. The available evidence, particularly with respect to emotional problems as abortion is repeated, is a strong indicator that abortion does not relieve stress and anxiety over the long run but instead increases it. Induced abortion is also frequently a direct cause or result of the breakup the relationship of the womans partner. This factor may increase smoking due to bereavement or grief from the loss of the relationship. A University of New Hampshire study linked high levels of social stress with high cigarette consumption and respiratory cancer deaths. There was a stronger stress-lung cancer connection among women than men. The researchers concluded
that many of the indicators to measure stress such as divorce and abortions could have a greater effect on women.8

In 1984, it was reported by the Centers for Disease Control that 106,063 women died from the effects of smoking with a loss of 288,273 years of potential life prior to the age of 65. This was an average loss of 2.71 years of life for each woman prior to age 65.9 In 1987, 42,748 women died of lung cancer in the U.S. 5116 deaths were in women between the ages of 35-54; 26,228 deaths were between 55-74, and 11,290 were at age 75 or greater.10

If induced abortion accounted for only a small increase in smoking among women, thousands of U.S. women will die prematurely each and every year.

According to the most recent figures women smokers are 10.8 times more likely to die from lung cancer than women non-smokers.11 Women smokers are 3.32 times more likely to die from lung cancer than women in general.1/(130.4 per 100,000 vs. 39.3 per 100,000). At current figures, which are rising, about 1 in 24 U.S. women will have lung cancer in their lifetime; about 1 in 7.2 women who smoke will have lung cancer in their lifetime.

**Women smokers are 10.8 times more likely to die from lung cancer than non-smoking women**

If the effects of induced abortion only increased smoking rates in post abortion women 2%, then 4310 additional women would have lung cancer each year and 3750 of these women would die each year from lung cancer at the present mortality rate of 87% If all smoking related deaths were taken into account the 2% smoking increase in post abortion women would lead to approximately 11,250 deaths annually. If smoking were increased 5% in post abortion women, then approximately 28,140 women in the U.S. would die annually from all causes attributable to smoking. If smoking rates were increased 10% in post abortion women, the death figure would reach approximately 56,280 women annually. And if induced abortion increased smoking rates 15% the annual death rate would be approximately 84,405.22,24

**DRUG ABUSE**

Induced abortion is a direct cause of drug abuse in 15-20% of the women who have abortions.12 Women with a history of abortion are frequently able to recall that the onset of drug abuse or increased drug abuse occurred as a direct result of their abortion experience and have stated that drugs were used to attempt to repress the abortion experience or to overcome nightmares or insomnia as a result of their abortion.13 In New Jersey and New York during 1987 the leading cause of death among black women aged 15 to 44 was from HIV/AIDS. The death rate for black women(10.3 per 100,000) was nine times that for white women(1.2 per 100,000). Among the death certificates that included any mention of HIV/AIDS among these black women, 27% also included drug abuse as a contributing cause.14 Induced abortion and particularly repeat abortion, has been found to be a risk factor for cocaine, heroin or methamphetamine use in women. A study of Boston inner-city women enrolled for prenatal care at a Boston hospital found that among those women with a history of two abortions they were twice as likely (19% v. 9%) to be using cocaine compared to non-cocaine using controls and three times more likely to be using cocaine (9% v.3%) if they had a history of three abortions.15 A San Diego study found that women who used both heroin and either cocaine or methamphetamine had an average of 2.7 abortions compared to 1.2 abortions for non-drug using controls.16

**ALCOHOL-RELATED FATAL CRASHES**

Induced abortion is a direct cause of alcohol abuse in 15-20% of women who have abortions.12 Since women who have had abortions have a higher incidence of alcohol abuse compared to women without any abortion history, they have a higher risk of a fatal crash in a motor vehicle. For example, a 1976 study of women seen at a detoxification center in King County, Washington found that women who were considered problem drinkers or secondary alcoholics were likely to have experienced abortions in the same year as their alcohol-related problem. Driving while intoxicated was an alcohol-related problem for both secondary
**DELAYED CHILDBIRTH**

Induced abortion is a major factor of delayed childbirth in the U.S. According to the statistics of the Alan Guttmacher Institute for 1987, 1,559,110 women in the U.S. had an induced abortion. 52.7% of these women reported no prior live births. 26.1% were under 20 years of age at the time of the abortion and 59.1% were under age 25. There are several major types of cancer which increase the risk of premature death in women if childbirth is delayed or is non-existent. These are breast cancer, ovarian cancer, cancer of the endometrium or uterine corpus. Several studies have also found that not having children is a risk factor for cancer of the colon and rectum. However this has not been definitely been established and may reflect a lifestyle issue. The above table lists the estimated number of new cases and estimated number of deaths for U.S. women in 1993.

**Breast Cancer**

Delayed childbirth or carrying a child to full-term increases the risk of breast cancer. A large international collaborative study published in 1970 of breast cancer and reproductive experience found that women having their first child under the age of 18 have only about one-third the risk of breast cancer of those whose first birth is delayed until age 35 or more. The U.S. Public Health Service and the National Institutes of Public Health have concluded that the risk of breast cancer for women who have never had children and women who have a first child after age 30 have...
a risk about three times greater than women who have a first child before age 18. It is not yet fully established whether induced abortion is a contributing cause for breast cancer independent of nulliparity. Some well designed studies have found that induced abortion does not provide the protective effect of childbirth against breast cancer, but tends to increase the risk of death from breast cancer at an early age. A case-control study in 1972-78 of young women in Los Angeles, County, California age 32 or less found that a first trimester abortion before a first full term birth was associated with a 2.4 fold risk of breast cancer. A case-control study in upstate New York of cases of breast cancer in women under 40 years of age reported to the Cancer Registry during 1976-80 and matched by year of birth and by residence using zip codes, found an elevated risk of 1.9 among those with an induced abortion.

Based upon the figures of the Alan Guttmacher Institute, 821,650 women in 1987 who had abortions of their first pregnancy, increased their risk of dying from breast cancer at sometime within their lifetime. It is estimated by the National Cancer Institute that approximately one out of nine women will have breast cancer in her lifetime. If there is no elevated risk from delayed childbirth, approximately 91,295 women out of the 821,650 women who aborted their first pregnancy would be expected to have breast cancer sometime in their lives. If the risk from delayed childbirth due to early abortion was 2.0, then an additional 91,295 women would subsequently have breast cancer from delaying childbirth due to induced abortion of their first pregnancy. Out of these additional 91,295 women about 18,260-22,820 would die prematurely from breast cancer from their 1987 abortion at the current mortality rate of 20-25%. These figures are only preliminary and may change as additional data, especially over the long term, is available. However, the data is based only upon the loss of the protective effect from no childbirth and is treated as if the woman were nulliparous. This is a conservative approach and does not treat induced abortion as having a separate increased risk compared to nulliparity which it may indeed have and some studies conclude.

Breast cancer is a major cause of premature death in women. In 1987, 40,899 U.S. women died of breast cancer. 688 women died between the ages of 15-34, 8489 died between the ages of 35-54, 20,071 died between the ages of 55-74, and 11,648 died at age 75 or greater.

Women who have never had children are twice as likely to develop ovarian cancer as those who have children

Ovarian Cancer

Studies of ovarian cancer in women have also found that childbirth exerts a strong protective effect against ovarian cancer which increases with the number of live born children. One study found that women who had no children were 2.45 times more likely to develop malignant ovarian tumors than women who had been pregnant three or more times. A study of borderline ovarian tumors in women in Washington state between 1980-85 found that the risk was 0.7 among women who had given birth to one or two children and 0.4 for three children compared to nulliparous women. A similar proportion of cases and controls reported a history of induced abortion which would tend to indicate that induced abortion does not have a protective effect. The U.S. Public Health Service and the National Institutes of Health have concluded that, "childbearing is the most important known factor in preventing ovarian cancer suggesting that hormones play a role in its development... Breast cancer may also increase a woman's chance of developing ovarian cancer." The American Cancer Society states, "Women who have never had children are twice as likely to develop ovarian cancer as those who have. Early age at first pregnancy, early menopause, and the use of oral contracept..."
TABLE 2

ANNUAL NUMBER OF DEATHS FROM SPECIFIED CANCER IN U. S. WOMEN: PRELIMINARY ANALYSIS

<table>
<thead>
<tr>
<th>Type of Cancer</th>
<th>Annual Number of Cases Attributable to Delayed Childbirth Due to Abortion</th>
<th>Annual Number of Deaths Attributable to Delayed Childbirth Due to Abortion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>2.00</td>
<td>91,295</td>
</tr>
<tr>
<td>Ovarian</td>
<td>2.00</td>
<td>12,640</td>
</tr>
<tr>
<td>Uterine Corpus</td>
<td>1.67</td>
<td>9,960</td>
</tr>
</tbody>
</table>


*Compared to one live birth

Endometrial Cancer or Cancer of the Uterine Corpus

It is estimated that U.S. women will have 31,000 new cases of endometrial cancer in 1993. Several studies have determined that a risk factor for endometrial cancer or cancer of the uterine corpus is few or no children. The U.S. Public Health Service and the National Institutes of Health state, "A risk factor for endometrial cancer is few or no children... Women of high socioeconomic status have an increased risk of developing endometrial cancer; diet and lifestyle may be contributing factors."25 "A case-control study in Los Angeles County, California between 1972-79 among white women concluded the relative risk for one full pregnancy was 0.54 and for two full term pregnancies was 0.22 compared to no full term pregnancy. Incomplete pregnancies, including both spontaneous and induced abortions, were associated with a slight decrease in relative risk. 5.6 incomplete pregnancies were concluded to be equivalent to one full term pregnancy in terms of risk reduction.31 In another study published in the Journal of the National Cancer Institute in 1977, women with 1 or 2 full term pregnancies had a 0.6
relative risk, and women with three or four full term births had a 0.3 relative risk of endometrial cancer compared with nulliparous women.32

At present rates the risk of endometrial cancer in U.S. women is approximately 1 in 55 women, then 14,940 out of the 821,650 women would be expected to have endometrial cancer. If the relative risk for endometrial cancer is 1.67 due to abortion of the first pregnancy and loss of the protective effect of childbirth, then 9960 additional cases of endometrial cancer would result. At a mortality rate of 17% the annual number of deaths from the increased incidence would be 1,693.

Cancer of the Colon or Rectum

Although the evidence is less certain, cancer of the colon and rectum may increase in women who delay childbirth. A Washington state study in 1976-77 found that the incidence of colon cancer in women with one or two children was reduced by 30% and for women with 3 or more children was reduced by 50% compared to nulliparous women.33 A Canadian study found a strong protective effect of early age of first pregnancy for both colon and rectal cancers with little or no effect based upon the total number of pregnancies.34 The data suggested that non-birth outcomes may be a risk factor for both colon and rectal cancer. A large Norwegian study of 63,090 women from 1956-1980 found a relative risk of 1.29 for colon cancer among women with 2 or more abortions and a 1.72 relative risk for cancer of the rectum also among women with 2 or more abortions compared to women with no history of abortion. Most of the abortions in the Norwegian study were thought to be spontaneous abortions.35

At present rates approximately 1 out of 23 women in the U.S. will have colon or rectal cancer in her lifetime. Based upon 821,650 U.S. women who abort their first pregnancy annually then 35,725 women would be expected to have colon or rectal cancer in their lifetime. If the risk of delayed childbirth due to abortion was 1.5 then approximately 17,860 additional women would have colon or rectal cancer as a result of the increased incidence. At the present mortality rate of 43% the annual number of premature deaths would be 7680. In 1987, 28,445 women in the U.S. died of cancer of the colon or rectum. 1,998 were between the ages of 35-54. 11,846 were between 55-74 and 14,443 were over 75.10

Thomas W. Strahan, Editor

REFERENCES


11. Lung Cancer and Smoking Trends in the United States Over the Past 25 Years, L. Garfinkel and E. Silverberg, CA - A Cancer


29. The Woman at Risk for Developing Ovarian Cancer, L. McGowan et al., Gynecologic Oncology, 7:325-344, 1979

30. Case-Control Study of Borderline Ovarian Tumors: Reproductive History and Exposure to Exogenous Female Hormones, B. L. Barlow et al., Cancer Research, 48:5849-5852, Oct. 15, 1988


34. Age at First Pregnancy and Risk of Colorectal Cancer: A Case-Control Study, G. R. Howe et al., JNCI, 74(6):1155, June, 1985