Colon Cancer Screening in Survivors

Of Breast Cancer and Gynecological Malignancies

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A popular misconception is that colon cancer is a disease predominantly of men. This is untrue; men and women are equally affected by colon cancer. Women who are survivors of some gynecologic cancers have a risk of colon cancer much higher than the average population, and should receive screening for early detection and cure.

Gynecologic cancers such as breast, cervical, endometrial or uterine, and ovarian cancer each year affect 250,000 women in the United States. The annual incidence rate is 150 per 100,000 women. Many reports have suggested an association between prior gynecological cancer and colon cancer. As the early diagnosis and thus long-term survival of the women with breast and gynecological cancer increases, physicians and the cancer survivors themselves will need to assess their risk of colon cancer and insist on colon cancer screening.

If you are a survivor of gynecologic malignancy, earlier or more thorough colon cancer screening may be warranted.

Cancer of the Cervix and Radiation Treatment

Cervical cancer is the second most common cancer in women. Cervical cancer and colon cancer do not share any common risk factors. We do not expect that women with cervical cancer would be at increased risk for developing colon cancer, and most studies have in fact documented no association between these two cancers.

However, in review of women with invasive (advanced) cervical cancer vs. carcinoma-in-situ (early), there was found to be increased risk of rectal cancer in the women with invasive cervical cancer. The main treatment for the invasive cancer at the time before the study was surgery and radiation to the pelvis. It appears that survivors of invasive cervical cancer who have radiation therapy have increased risk of rectal cancer starting about 10 years after radiation. This suggests that the radiation has a carcinogenic effect on the colon. Numerous other studies have also documented an increased risk of rectal cancer following radiation therapy to the pelvis.

Women with cervical cancer who did not receive radiation therapy are not at increased risk of colon cancer, and simply need routine screening.

Endometrial and Ovarian Cancer

Endometrial cancer and ovarian cancer are closely linked to colon cancer. This occurs in a genetic syndrome called hereditary non-polyposis colorectal cancer (HNPCC) or "Lynch Syndrome". HNPCC is a genetic disease passed by one parent in a pattern called "autosomal-dominant", meaning that if a parent has the disorder, each child is at 50% risk of having the defective gene as well.

In HNPCC, colon cancer occurs early, between the ages of 40 and 50, which is two decades younger than the age of most colon cancer in the general population. The colon cancers tend to be higher up in the colon than usual, and people with HNPCC tend to get multiple sites of cancer within the colon.

There are two types of HNPCC. Lynch Syndrome I consists of cancer limited to either the colon or rectum. In Lynch Syndrome II, family members are also prone to develop malignancies of the uterus, ovaries, stomach and pancreas.

In a study of families with Lynch Syndrome II, the most common form of cancer after that of the colon was endometrial. The average age at diagnosis of the endometrial or uterine cancer was 46 years old, compared to nearly 60 years old in the general population. It is recommended that women from HNPCC families have thorough cancer screening of the colon and gynecologic organs as they have a 50% risk of being a carrier of Lynch Syndrome II. Clearly, women in families with Lynch Syndrome II who have already developed cancer of the uterus or ovaries are at substantially increased risk for developing colon cancer. Genetic testing for NHPCC is now available.

There is also increased risk of colon cancer in women who have sporadic or non-genetic endometrial cancer. Recently data from twenty studies was compiled examining the incidence and relationship of colon cancer to breast, endometrial, and ovarian cancer. They identified the "relative risk", that is, the risk over that of average population that these women might

have colon cancer. A relative risk of 1.0 indicates no increased risk over that of the general population; while a relative risk of less than 1.0 would indicate a risk lower than average.

In this study, it was found that the age-adjusted risk for colon cancer in women after breast cancer was 1.1; after uterine cancer 1.4; and after ovarian cancer 1.6. Thus women who have survived endometrial cancer or ovarian cancer are at statistically increased risk of colon cancer. The increased risk is particularly significant in survivors of uterine or ovarian cancer.

The risks increase further with younger age at diagnosis of a gynecological malignancy. If you were diagnosed with endometrial cancer at an age less than 50, your risk skyrockets to 3.39. If you have survived ovarian cancer, your overall risk is 1.35; however if you were diagnosed between ages 50 and 64 your risk is 1.52, and if your age was less than 50 at diagnosis of your ovarian cancer you risk is 3.67. This data clearly suggests that women who are diagnosed with an endometrial cancer before age 50 or ovarian cancer before age 64 are at a greatly increased risk for developing colon cancer. This risk is similar in magnitude to the increased risk if one has a first-degree relative with colon cancer.

Breast Cancer

Because they are both common cancers in women, the relationship between breast cancer and colon cancer has received considerable attention. In a review of all studies evaluating the association between breast and colon cancer, only a weak association was noted, with relative risk between 1.1 to 1.15. As discussed in the preceding section, "relative risk" is the risk over that of the average population that these women might have colon cancer. A relative risk of 1.0 indicated no increased risk over that of the general population, while a relative risk of slightly higher than 1.0 would indicate a risk slightly higher than average.

In a well done recent study of colonoscopy in asymptomatic women with personal history of breast cancer, there were found an identical number of polyps in breast cancer survivors compared within normal individuals.

A personal history of breast cancer does not predict a higher risk of colon polyps. After a suitable interval following treatment of their breast malignancy, breast cancer survivors should begin or resume the usual screening procedure advocated for average risk individuals, including fecal occult blood testing and screening colonoscopy when age appropriate.

Conclusion

The average American has a 6 percent lifetime risk of colon cancer. We all, both men and women, share this same high risk. Oftentimes, women who are diligent with mammography and pap smears neglect their screening for colon cancer, perhaps due to lack of awareness, distaste or fear. It is very important that women insist on colon cancer screening.

Women who have had cervical cancer or breast cancer are not at significant increased risk for colon cancer. The current screening recommendations for average risk individuals is likely appropriate for those two groups of women.

However, for certain subgroups of women, women with HNPCC gene, women with uterine or ovarian cancers especially at a young age, and women who have received pelvic radiation, the risk of colorectal cancer appears to be substantially increased. Screening colonoscopy is essential for these women.

Complete and Urgent Screening is Recommend for:

1. Ovarian Cancer Survivors
2. Uterine Cancer Survivors
3. People who have received pelvic radiation therapy
4. Family members of those with HNPCC and those with HNPCC

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