Cervical Cancer:
Jennifer's Story

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Jennifer's Cancer

Jennifer, 28, presented for a Pap smear after receiving a letter from a screening program. She had not had a Pap smear since age 21.

Jennifer is very healthy. Her family doctor noted the Pap smear caused frank bleeding and the cervix appeared irregular, "bumpy."

The Pap smear report was unsatisfactory, as the slide was obscured by inflammation and blood. Followup was recommended. In the meantime, on the basis of the abnormal appearing cervix, Jennifer was referred for further assessment.

At colposcopy, suspicious findings suggested cervical cancer. A biopsy was done, confirming microinvasive cancer. This resulted in an urgent cone biopsy. The specimen was replaced by squamous cell cancer that showed no invasion into lymphatics or blood vessels.

The margins were clear, but the tumour was invasive for 7 mm.

More on Jennifer's cancer

Jennifer's cancer appears to have been completely removed by the cone biopsy. However, two questions remain:

1. Is this adequate therapy?
2. What effect will this or other treatments have on her fertility?

What about Jennifer's treatment?

Traditionally, Jennifer would be offered a radical or extensive hysterectomy with a complete pelvic lymphadenectomy. Because the depth of invasion of the tumour was 7 mm, there is a 15% to 20% chance of lymph node involvement.[1] However, the five-year survival is excellent, at 90%.[3]

Five-year survival rate is excellent; 90%.

Because Jennifer has negative cone margins and the lesion is a squamous cell cancer (rather than an adenocarcinoma), and because there are no other negative prognostic features, she could be considered for a radical trachelectomy and laparoscopic pelvic lymphadenectomy.

The cervix and its surrounding tissues are excised vaginally after a laparoscopic lymphadenectomy is done and quick sections of the nodes confirm that there is no sign of metastatic cancer. A permanent suture is then placed in the lower uterine segment/upper cervix so as to allow carriage of a pregnancy. Any future delivery would be done by Caesarean section.

Can Jennifer bear children?

Pregnancy rates of women like Jennifer, who attempt conception after a radical trachelectomy, vary from 49% to 78%. Successful live births occur in 61% to 82% of those who conceive.

Recognized complications include preterm rupture of membranes resulting in fetal loss or premature birth.[3,4] A radical trachelectomy is still not considered the standard of treatment for all cases, but is an option for young women with stage 1A2 or small 1B1 cervical cancers who wish to preserve their fertility.

9% of all cancer deaths, and 12% of cancers diagnosed in women, are gynecologic.

What role does HPV play?

Cervical cancer is almost always related to human papillomavirus (HPV). Younger women, such as Jennifer, are very prone to infections, but usually clear them. Older women are less likely to have HPV, so if present, it is more likely to represent a progressive infection.

Does screening help?

Screening is the most significant stumbling block in the prevention of cervical cancer. Because gynecologic cancers represent 12% of diagnosed cancers in women, and 9% of all deaths due to cancer, every province has strategies to improve the detection of precancerous lesions.[5] Saskatchewan, for instance, instituted an invitational screening program where all eligible women are invited by letter to present for a Pap smear.

It is important, however, not to rely on Pap smear screening alone, as this is merely a screening test. Clinical assessment is very important.

In Jennifer's case, the Pap smear was obscured by blood and inflammation. This is not unusual in the case of a cancer. Fortunately, the clinical picture of an irregular cervix prompted the family doctor to consider referral even before the inadequate result had returned.

In addition, cervical biopsy is, of course, quite shallow, so the depth of cancer invasion cannot be assessed on biopsy. It is necessary to do a cone biopsy to determine whether the lesion requires a radical excision or just a simple excision without lymphadenectomy.

Are there other treatment options?

Cervical cancer beyond surgical control is now treated with radiation combined with chemotherapy. There are, however, new side-effects. Different chemotherapeutic agents are under trial. In addition, it is now clear that good tissue oxygenation also results in more effective radiation control of tumours. Blood transfusions or growth colony stimulating factorcan also be used.

What happens after treatment?

Premenopausal women who undergo radical radiation therapy may suffer a premature and permanent menopause.

Estrogen and cervical cancer are unrelated. It is safe and recommended to treat the prematurely menopausal cervical cancer patient with:

- hormone replacement therapy,
- estrogen, and
- progesterone. CME

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