



Smear Tests – Preventing Cancer of the Cervix

By Simon Crocker

The incidence of cervical cancer has reduced in the past 10 years, but women are still dying of this preventable disease. That's why it's so important to keep that smear test appointment.

The cervix is the lower part of the uterus (womb), positioned at the top of the vagina, providing an entrance to and exit from the uterus. At the entrance to the cervix is the junction of 2 types of skin – the squamous epithelium continuous with the skin of the vagina and vulva and similar to the skin on our external surfaces, and a glandular, mucus-producing skin that continues upwards to line the cervix, uterus and fallopian tubes. It is around the junction of these 2 types of skin that changes leading to cervical cancer occur most commonly.

Cancer of the cervix usually takes many years to develop, and the cells go through a precancerous phase called cervical intraepithelial neoplasia (CIN). It is this phase that cervical smear tests are aimed at – they may show cancerous cells, but are really designed to detect the pre-cancer, CIN, which is curable. The lesson is: 'Testing detects early changes that may lead to cancer'.

Is cervical cancer common? The precancerous stage is very common, and increasing, but due to the successful treatment of the precancerous phases (CIN2 and CIN3) the occurrence of actual cancer has gone down by 37% in 10 years, and the number of deaths has reduced by 40%. However, cervical cancer still causes 3,000 deaths per year in the UK, and a high proportion of

patients with a new diagnosis of cervical cancer have not had a smear test in the previous 15 years – frightened, unaware of the benefits or just ‘head-in-the-sand’ – a chance to find a curable pre-cancer missed!

An abnormal smear test result suggesting CIN is followed by a specialist examination with a colposcope – a small microscope used to inspect the surface skin of the cervix and find the patch of abnormal skin. Tiny samples can be taken for analysis - if there is a minor condition (CIN1) it is left alone, and if a pre-cancer is identified, it can be treated under local anaesthetic in the outpatient department there and then.

The Role of HPV

What causes the pre-cancer and cancer? It is normally a result of the human papillomavirus (HPV), which is transmitted by sexual intercourse. When the virus is contracted the body’s immune system will often react immediately and eliminate the virus, but if the virus remains for longer it may produce the cell changes that lead to CIN and, many years later, cancer. When the immune system is weaker than normal, HPV is more likely to remain and stay active. Situations in which the system is weakened are smoking, dietary deficiencies, the use of steroids and anti-rejection drugs (used after transplants), and with infections such as HIV.

Cervical pre-cancer and cancer are more common when sexual intercourse has been started at an early age, and where there have been multiple sexual partners – the more partners, the more likely it is that the woman will have come into contact with HPV, although an affected woman may have had only one partner but still have contracted the virus.

Symptoms

What symptoms occur? Initially none: the routine smear may have suggested the diagnosis. The commonest symptom is abnormal bleeding in between periods, or as a result of intercourse. There may be an offensive discharge and deep discomfort may occur with intercourse. If you suffer these

symptoms you should visit your GP, practice nurse or genito-urinary clinic urgently; most often there will be an innocent explanation.

More advanced may cause bladder or bowel frequency, and with late disease there may be incontinence. Abdominal pain only occurs with spread of the cancer, and a decrease in energy with anaemia or kidney failure – due to blockage of the ureters as they drain urine from the kidneys to the bladder – may be a presenting symptom of advanced disease.

Diagnosis

Diagnosis depends on a biopsy and following the confirmation of the cancer, tests will be arranged to look at the general health. Blood tests and a chest X-ray and a CT (X-ray scan) or MRI (magnetic resonance imaging) will be used to study the extent of the growth, that is, to establish what stage it has reached.

FACTS...ABOUT SMEAR TESTS

- You don't need a smear test if you are under 21
- You don't need a smear test if you have never had sexual intercourse
- You should go every 3 years till you are 65
- If you have had normal smears up to the age of 50, you probably don't need another smear test (but this is not government policy)

Treatment

• Surgery

If the cancer is microscopic a small cone of tissue removed from the cervix (a loop diathermy or a cone biopsy) will be all that is required. If the tumour is more established but still confined to the cervix, more extensive treatment is needed in the form of a radical hysterectomy. The operation is associated with removal of the upper third of the vagina, the cervix, uterus and the lymph glands of the pelvis; these glands act as filters of tissue fluid draining through tiny lymph channels and the analysis of the glands may help to show if cancer cells have spread. The ovaries are not removed in younger women, as the cancer is not stimulated by hormones, although in post-menopausal women the ovaries are removed as they are inactive and can be the site of future, unrelated disease.

Where the tumour is confined to the cervix and surgery would be advised there is a special consideration in women who hope to have children in the future. A new operation, still being tested, is trachelectomy, that is, removing the cervix, via the vagina, but leaving the uterus. Abdominally, the lymph glands are still removed for analysis. Pregnancy after such surgery may not occur and there are risks of miscarriage due to weakness of the lower part of the uterus. If a woman wants to consider this operation she is referred to one of the major centres where the operation is being tried out.

- **Radiotherapy**

Where the patient is unfit for radical surgery, or the tests show spread of the cancer within the pelvis but outside the cervix, the treatment is radiotherapy. This treatment consists of a course of external treatment to the lower abdomen and pelvis, just like taking an X-ray, 5 days a week for about 3 weeks, and 1 or 2 insertions of a radioactive source into the top of the vagina, the source remaining in place for a few minutes to a few hours. Recently it has been shown that radiotherapy is more effective if combined with low-dose intravenous chemotherapy. The drug used is normally a platinum compound and does not have the side-effects, such as hair loss, of the higher dose or stronger drugs.

Rarely, the tumour will have spread to the bladder or bowel, and major surgery including the formation of stomas (urostomy or colostomy) may be necessary. These enable bowel or bladder contents to be emptied into bags on the abdominal wall.

What lessons can we learn?

The smear testing campaign saves lives – cervical cancer can be prevented, and early cervical cancer well treated has a very high cure rate. At whatever stage the cancer is diagnosed, the woman and her partner will need advice and support, which is available not only through their friends but from the oncologists, specialist nurses and various excellent support groups.

HELPFUL LINKS

CancerBACUP

Tel: 020761302121

www.cancerbacup.org.uk

Jo's Trust

www.jotrust.co.uk

NHS Cancer Screening Programme

<http://www.cancerscreening.nhs.uk/cervical/#smear>

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