Leaflet 6: HPV, anal warts & anal dysplasia

Incorporating hospital and community health services, teaching and research
What is HPV?
HPV stands for Human Papilloma Virus. It is a very common virus that is spread by direct contact, and infects skin cells and mucosae. The mucosae are the moist membranes that line different parts of the body, including the mouth, throat and genital area.

When a cell is infected by HPV, the HPV genes (instructions in living organisms used to make proteins) become part of the genes of the skin cell and change the way it behaves.

There are over one hundred types of HPV and about 40 of these can affect the genital area. Some types of HPV can cause skin warts and verrucas but many types do not cause any problems or harm at all.

Most adults get HPV at some point in their lives, and in most cases your body will get rid of the virus without you ever knowing you had it. However HPV is also linked to the development of abnormal cells. If left untreated, these abnormal cells may go on to develop into cancer.
What changes does HPV cause?

Once the skin is exposed to HPV, four possible results may occur,

1. The body’s immune system may be able to clear the infection. It is still possible to become re-infected through later contact.

2. The body is not able to clear the HPV infection, and the HPV genes become part of the genes in the infected skin cell. The virus may stay “dormant” in the skin cell. The skin cell is infected with HPV indefinitely, but the skin cell behaves normally and there are no noticeable changes. However, the virus may become active many years later.

3. The body is not able to clear the HPV infection, and the viral genes cause the skin cell to grow in an abnormal way and produce a visible growth – a wart.

4. The body is not able to clear the HPV infection, and the viral genes cause the skin cells to undergo changes that could lead to skin cancer. Early cell changes may be seen. These are called dysplasia. Some HPV subtypes such as types 16 and 18 are more likely to produce cancerous changes.

What are the symptoms of HPV, anal warts and anal dysplasia?

- Patients with “dormant” HPV infection or a small number of anal warts usually have no symptoms. Other patients may notice small growths in the anal area that may increase in size or number. They may experience anal itching, burning or tenderness, anal bleeding, or anal discharge. In some patients, the warts may become very large and cause pain, significant discharge and odour, or interfere with the ability pass bowel movements.
In men, genital warts mainly appear on the penis and scrotum. In women, they tend to be seen on the vulva, vagina and cervix. Both sexes may be affected in the perineum, around the anal area and inside the anal canal.

The majority of external genital warts are caused by HPV types 6 and 11 which are not associated with significantly increased risk of transformation into precancerous cells.

However, 10% of genital warts are caused by HPV types 16 and 18 and these types are associated with an increased risk of:

- Cervical carcinoma
- Vaginal, vulval and penile carcinoma
- Anal cancers
- Mouth and throat cancers

More about precancerous cells and dysplasia can be found in the leaflet Anal Intraepithelial Neoplasia (AIN).

**How is HPV treated?**

There are three main treatments for HPV related disease: chemical destruction, immune therapy, and surgical treatment.

The choice of treatment for warts depends on how much disease is present and whether it is on the skin outside of the anus or in the lining inside the anal canal.

Very small lesions may be treated with topical medications, however most of warts need to be removed surgically. Once anal dysplasia develops, surgical destruction is necessary.
Chemical destruction

The most common chemical used to treat anal warts is Podophyllin toxin. This is applied directly to the wart surface. It usually takes several weeks for a response to happen. Re-appearance of warts is common. Other substances like Trichloroacetic acid, or 5-fluorouracil are rarely used. The response rate is not better, but side effects are increased.

Immune therapy

Imiquimod (Aldara) is a cream that is approved for the treatment of warts. It is typically applied for 10 hours at a time, usually 3 times each week overnight, for up to 16 weeks. It often reduces the number and size of the warts and may or may not completely resolve the process.

Surgical destruction

Surgical treatment may involve destroying the lesion or removing them. There are several ways to destroy warts. Warts may be frozen (cryotherapy with liquid nitrogen) or burned (infrared coagulation - IRC, electrocautery, or laser). Surgical excision has the additional benefit of obtaining tissue for microscopic examination to look for dysplasia or cancer. These treatments usually require either local or general anaesthesia.

It is important to realize that regardless of the treatment, recurrence of HPV is common. Skin cells outside of the visible area of disease may already be infected and not detectable until new warts form.
Is there an HPV vaccine?

Two vaccines are available for HPV, Cervirax and Gardasil. Those vaccines are developed specific for 2 or 4 subtypes of HPV including those most likely to cause cancer. HPV vaccination is part of the national vaccination programme and is currently given to girls around the age of 12 years.

Vaccination is currently not recommended for the prevention of anal cancer, precancerous or dysplastic lesions, and genital warts caused by HPV. Studies are under way to determine effectiveness in those circumstances.
If you need any other additional support or advice, please call

**HANS Clinical Nurse Specialist - 020 8510 5296**

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**Patient Advice and Liaison Service (PALS)**

PALS can provide information and support to patients and carers and will listen to your concerns, suggestion or queries. The service is available between 9am and 5pm

- Tel: 0208 510 7315
- Email: PALS@homerton.nhs.uk

For information on the references used to produce this leaflet, please ring 0208 510 5302/5144 or email patientinformation@homerton.nhs.uk

If you require this information in other languages, large print, audio or Braille please telephone the Patient Information Team on 0208 510 5302/5144 or email: patientinformation@homerton.nhs.uk

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