

Anal Intra-Epithelial Neoplasia (AIN)

What is anal intra-epithelial neoplasia?

Anal intra epithelial neoplasia AIN is a condition which affects the skin around the anus. The severity of the condition is graded from I to III, with III being the most severe. AIN is important because some cases of AIN III can go on to develop into an anal cancer.

What causes anal intra-epithelial neoplasia?

Most AIN is triggered by the human papilloma virus (HPV). This is the same virus that causes anal warts. AIN is also related to changes in the vulva (Vulval Intra-epithelial Neoplasia, VIN) and cervix (Cervical Intra-epithelial Neoplasia, CIN) in women. The human papilloma virus is the common link between all these conditions. Other recognised risk factors include smoking and immunosuppression. Patients may be immunosuppressed because they are taking drugs to suppress their immune systems such as transplant patients. Other causes of immune suppression include HIV (Human Immunodeficiency Virus) infection. Patients with AIN who are immunosuppressed are at greater risk of developing anal cancer.

What symptoms does anal intra-epithelial neoplasia cause?

Some patients may be unaware that they have AIN present. The principle symptoms are:

- Itching
- Raised nodules or tags by the anus

Sometimes AIN can affect all of the skin around the anus (multifocal disease), this is more common in immunosuppressed patients. In other cases it may be confined to a single area.

How is anal intra-epithelial neoplasia investigated?

When you are seen in clinic the consultant will take a full history and carry out a clinical examination. Usually this will involve a rigid sigmoidoscopy and sometimes a proctoscopy as well to carefully examine the anal canal.

Skin biopsies are normally required to establish the diagnosis. The surgeon will normally take several biopsies from around the anus to assess the extent of the changes, this process is referred to as mapping. This is normally carried out under a general anaesthetic.

We normally recommend that all women are also seen and assessed by a gynaecologist to check for vulval or cervical disease.

How is anal intra-epithelial neoplasia treated?

If isolated AIN is identified this is usually treated by excision. This can be carried out as a day case under a short anaesthetic. The affected area of skin is removed. The wound is usually left open to heal by itself.

For further advice about looking after the area after the surgery, patients can see our advice leaflet "Caring for yourself after minor anal surgery" which can be found in the Patient Information Section.

Areas of AIN I or II do not normally require any treatment other than careful observation.

Where the AIN III changes are extensive (multifocal) the surgeon will recommend removing any suspicious ulcerated or raised areas. Some topical preparations such as Imiquimod may be beneficial. In very rare cases the surgeons may consider removing all of the skin around the anus in this case a skin graft would be required.

Very occasionally if left untreated anal cancer can develop.

Follow-up visits to the clinic are required to ensure that the anal skin can be closely monitored. Further biopsies may be required.

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What are the next steps?

If you think you have this condition or any of these symptoms, you will need to seek medical advice.

If you have private medical care or wish to pay to see a consultant:

Take this factsheet along to your own GP and request a referral to one of our consultants.

For more information or to make an appointment:

Contact the Birmingham Bowel Clinic on 0845 241 7762 or email enquiries@birminghambowelclinic.co.uk.