

# *Anal canal and rectal condylomatosis: exhaustive proctological examination and STD patients*

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## S U M M A R Y

Infection of the anorectal area with some subtypes of HPV virus results in local involvement that appears as warty, papillary, condylomatous lesions. Patients exposed to high-risk HPV types, such as HPV-16, -18, and -31, are at risk for developing high-grade dysplasias or carcinomas. We reviewed 15 years (1991–2006) of patient records from our proctological unit and STD center and found 1,122 patients affected by anorectal condylomatosis. This study supports the importance of an exhaustive proctological examination in patients suffering from condylomatosis of the genital area, especially of the perianal zone, and in patients examined in the STD clinic, even for other reasons. An unknown anorectal condylomatosis is a frequent cause of relapse of anogenital warts. Anal warts should be examined by proctoscopy to assess the full extent of the lesions and prevent possible complications.

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## *Introduction*

### **K E Y W O R D S**

**anal canal,  
condyloma,  
proctological  
examination**

Approximately 40 different types of HPV can infect the anogenital tract and most of them appear as warty, papillary, condylomatous lesions. HPV infections in the genital area are usually sexually transmitted (1–4).

HPVs associated with genital tract lesions have been divided into low- and high-risk HPV based on the genotype's association with the development of benign or malignant lesions. Genital condylomata are benign lesions usually resulting from infection by HPV-6 or HPV-11. Patients infected by high-risk HPV types, such as HPV-16, -18, and -31, are at risk of developing high-grade dysplasias or carcinomas (5–11).

The anal canal is 2 to 4 cm long and is continuous with the rectum above the pelvic floor. The mucous membrane of the upper half of the canal is lined by columnar epithelium and the lower half is lined by stratified squamous epithelium. There is a transition zone with a sharp demarcation between the two types of mucosa, termed the dentate line (12). Anal condylomatosis can involve the upper half of the canal, the lower half of the canal, and (mainly) the dentate line (5–11).

HPV infection is emerging as a relevant factor in the oncogenesis of various squamous cancers. As a matter of fact, HPV DNA has been detected in 88% of anal cancer and in more than 90% of cervical squamous cell carcinomas. Moreover, 47% of anal

squamous cell carcinomas have a positive history of anal HPV infection (13–21).

## Materials and Methods

In a period of 15 years (1991–2006) we have observed 1,122 patients (742 M and 380 F) with an average age of 31 (ranging from 17 to 78) affected by anorectal condylomatosis. Multiple biopsies were performed, including highest localization to the dentate line. We identified the HPV genotype using immunohistochemical techniques on the 104 most recent patients (2004–2006).

We preferred multisession cryosurgery (using nitrous oxide or liquid nitrogen) to manage the lesions; when the lesions were too large (over 3 cm<sup>2</sup>), we referred them for radiochemotherapy or first surgical excision.

Visible condylomas were treated in one or more steps, every 20 days. The follow-ups subsequent to the last procedure were carried out with 5% acetic acid solution at 3, 6, and 12 months. When relapse occurred, cryosurgery was applied and the follow-up started again. All endoanal condylomas were treated with a proctoscope, and proctoscopy was performed at every check.

We performed surgical excision using local, locoregional, or general anesthesia in 107 patients (9.5%) with lesions larger than 3 cm<sup>2</sup> or with significant anal sphincter hypertonicity.

## Results

We observed that 142 patients (12.6%) suffered from endoanal (anorectal) condylomatosis only, 362 patients (32.3%) from endoanal and perianal condylomatosis, and 618 patients (55.1%) from perianal condylomatosis only, which means that 504 patients (44.9%) were suffering from anal and/or rectal HPV infection. Almost half of the patients had condylomatosis undetectable by perianal examination.

Seventy-seven percent of the patients had already been treated for or were currently suffering from other anogenital warts below the anal verge or in other areas.

Two-thirds of the patients' sexual partners developed the infection themselves. Ten percent of the patients reported an infected partner and 20.2% at least one unknown partner in the last year.

Only 10.2% of the males with endoanal localization identified as homosexual; 0.8% were HIV+, 2% were HBV+, and 1.8% were HCV+.

Cryosurgery was used in 1,043 patients (93%). We followed 940 patients for 12 months after the last

surgery for signs of healing. Of them, 671 (71.4%) had recovered 3 months after the last procedure (1 to 4 procedures, average 2.4) to treat all visible lesions. A total of 207 patients (22%) relapsed after 6 months, and 62 patients (6.6%) relapsed within 1 year of apparently being cured.

All patients that relapsed after 6 to 12 months had endoanal condylomas, with or without perianal localization, and patients with concomitant infections such as HIV, HBV, and HCV were more likely to relapse.

In 56 cases (5%), the biopsy was curative and there were no relapses because the condylomas were not extensive and further cryosurgery was not necessary.

In 21 patients (1.8%), the histological examination revealed concomitant neoplasia: 3 basocellular carcinomas, 4 squamous cell carcinomas, 6 carcinomas in situ, 5 cases of Bowen's disease, and 3 Buschke-Löwenstein tumors. These patients underwent more radical surgery or radiochemotherapy.

The HPV genotype was identified by immunohistochemical techniques in the most recent 104 patients. There were 16 high-risk (HR) HPV patients (15%) and 88 low-risk (LR) HPV patients (85%). High-risk patients continued follow-up longer than 1 year.

## Discussion

It must be pointed out that, in the Anal Screening Program, anal intraepithelial neoplasms (AIN) are linked to HPV infections. We believe that exfoliate anal cytology should be carried out every year on all patients affected by high-risk anal condylomas and not limited just to homosexual or HIV+ patients (13–21).

Any atypical warts should be biopsied before treatment is initiated (7) in order to identify the HPV genotype. The sexual habits of the patient and his or her partner(s) and the patient's immunological pattern should be checked (8–11).

Cryosurgery is a useful, non-invasive technique to promote rapid healing and the use of acetic acid solution to detect micro-condylomatosis is recommended (22, 23).

## Conclusion

In this study we stress the importance of an exhaustive proctological examination using proctoscopy to determine the extent of the condylomatosis, prevent possible relapse and complications, and improve the management of anogenital warts.

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