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Original article

Value of conventional cytology in the presence of macroscopic lesions of the anal canal☆

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A B S T R A C T

Objectives: To verify the value of conventional cytology for the diagnosis of macroscopic lesions of the anal canal and to describe the limitations of the samples.
Method: We evaluated 395 conventional cytology samples obtained by brushing the anal canal of patients (predominantly male, HIV-positive) and compared them to the presence of macroscopic lesions of the anal canal observed under anorectal examination.
Results: Of the total, 91.6% of samples were classified as adequate. Cellular elements representative of the anal transformation zone were observed in 63.5% of samples. Sensitivity in the presence or absence of cellularity was 80% and 31%, respectively.
Conclusion: The study demonstrates the feasibility of using conventional anal cytology in outpatients.

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Valor da citologia convencional na presença de lesões macroscópicas do canal anal

Palavras-chave:
HPV
Prevenção de neoplasia anal
Citologia convencional

R E S U M O

Objetivo: verificar o valor da citologia convencional no diagnóstico de lesões macroscópicas do canal anal e descrever as limitações das amostras obtidas.
Método: avaliamos 395 exames citológicos convencionais obtidos por escovado do canal anal de pacientes predominantemente do sexo masculino, soropositivos para HIV, e comparamos com a presença de lesões macroscópicas do canal anal constatadas ao exame proctológico.
Resultado: o percentual de amostras adequadas foi de 91,6%, e os elementos celulares representativos da zona de transformação anal foram observados em 63,5% das amostras. Encontramos sensibilidade de 80% e 31% na presença ou ausência desta celularidade, respectivamente.

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Conclusão: O estudo demonstra a possibilidade de utilização da citologia anal convencional no rastreio de lesões macroscópicas do canal anal em pacientes ambulatoriais.

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Introduction

The incidence of anal squamous cell carcinoma and its precursor lesions increased in recent decades, and it has been widely proven the participation of HPV (human papillomavirus) types 16 and 18 in its pathogenesis.[1]

Although still a relatively rare cancer, its incidence has been rising alarmingly in younger patients, especially men who practice receptive anal sex with men (MSM, so-called by its acronym in English), independent of HIV infection, but with greater involvement of those infected with this virus. Women with a history of multicentric squamous intraepithelial neoplasia, heterosexual men and women HIV-positive or immunosuppressed for other reasons also have contributed to the increased incidence of this neoplasia.[2]

In Brazil we do not have data on the incidence of anal cancer, because they are included in the colon and rectum topography. In these topographies 14,180 and 15,960 new cancer cases in men and in women, respectively, are expected, corresponding to an estimated risk of 15 new cases per 100,000 men and 16 new cases per 100,000 women.[3] Regarding the situation of AIDS, there has been an increase in the number of cases of the disease in young people included in the MSM exposure category.[4]

The highly active antiretroviral therapy (HAART) seems not to modify the pathophysiology of HPV anal lesion in HIV-infected patients, suggesting that a progression to serious injury should occur in patients with prolonged survival.[5]

The similarities between cervical and anal cancers, for instance, the association with HPV, the greater occurrence in the existing epithelial transformation zone in both topographies and the ability to diagnose early lesions susceptible to less aggressive treatments, led to the use of exfoliative cytology as a diagnostic test for more than a decade, and this procedure can be performed by the conventional method or in liquid medium, with similar results. Still, the current incidence of anal cancer is similar to that of cervical cancer before the establishment of prevention programs, bringing great expectations in the use of anal cytology.[1,2]

Several studies show that cytology has a good sensitivity but low specificity. A meta-analysis reported variations in sensitivity between 42 and 98% and of specificity between 16 and 96%.[1] An important factor for this variation may be due to lack of standardization of how the cytobrush should be introduced into the anal canal[6] and to the greater difficulty in the obtainment and preparation of anal canal samples, compared with the cervical collection.[7] The evaluation of the screening effectiveness for long-term prevention of anal as well as cervical cancer still remains to be done,[1] A contributing factor to this performance variation is the little experience of cytopathologists with the sampling procedure in the anal canal. Aiming at the improvement of this procedure, the College of American Pathologists (CAP) recommends the ampliation of its use.[2]

In this study we report the performance of this test in the presence of macroscopic lesions in the anal canal in outpatients seen at the Hospital Federal de Ipanema/MS/Rio de Janeiro, using the conventional method, a technology widely available in our country. Should it prove appropriate, it will contribute for the prevention of anal canal cancer in outpatient visits.

Material and method

From April 2005 to December 2011, 395 cytopathology exams of anal canal were compared with the clinical diagnosis of presence of macroscopic lesions. The information was extracted from cytologic requisitions and medical records of the patients examined.

The study was approved by the Ethics Committee on Human Research of the Hospital Federal dos Servidores do Estado (CEP_HFSE - 000474 protocol).

Patients whose samples were included in this trial were mostly men attended at our proctology outpatient clinic. The reasons of the visits were anal sex practice, some anal claim arising out of sexually transmitted disease or otherwise, presence of warts, or seropositivity for HIV. Samples of three patients from the gynaecology outpatient clinic were also included. One of them had perianal condylomata and the other two a diagnosis of vulvar intraepithelial neoplasia (VIN II and VIN III).

In most cases, the sampling was done in two slides at the first consultation, because no prior preparation is necessary. Patients who reported having receptive anal sexual relationship or made use of suppositories, creams or enema the day before the consultation were told to return later, observing the necessary precautions before collection.

As for the collection, two clean glass slides with frosted end, with the initials and clinical record number of the patient, and an unplugged slide rack tube containing ethyl alcohol up to 1 cm from the edge were arranged on a auxiliary table. The patient was placed in the Sims (left lateral decubitus position, with legs tucked) or gynaecological position. The anal slit was then opened with the left hand of the operator, and the patient was requested to help in the case of bulky buttocks, to prevent contamination with external condilomata, when present. With the right hand, the operator introduced a cytobrush previously moistened with distilled water or physiological saline for 4-5 cm, in order to reach the anal transformation zone starting 1 cm below the pectineal line and extending up to 2 cm above its upper edge. Then, soft and slow rotation movements were preformed, pressing lightly on the wall of the anal canal and lower rectum, and the collection was carried out blindly.

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