Unusual histologic finding in tissue obtained from voluntary pregnancy termination: a case report

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Summary

Background: An unusual histologic finding in tissue obtained from voluntary pregnancy termination (VPT) is reported to demonstrate the utility of pathologic examination of this specimen. *Methods:* A 30-year-old woman with a history of depression was referred to the gynecology clinic for VPT in the eighth week of gestation. Material obtained from uterine cavity curettage was macroscopically and histologically examined. Based on the histological findings, a molecular study by polymerase chain reaction amplification (PCR) was performed to evaluate the presence of human papilloma virus (HPV) DNA. For DNA extraction, 4-µm-thick histological sections were stained with hematoxylin and examined under a stereomicroscope. The PCR amplification was performed with the L1 consensus primers Gp5+/Gp6+, giving an expected PCR product size of 150 bp: these primers have been developed to allow the detection of a broad spectrum of mucosotropic HPV genotypes. *Results:* Histological examination of tissue obtained from the VPT showed immature villi with post-abortive hydropic degeneration and the presence of a small fragment of cervical mucosa with a squamous intraepithelial lesion characterized by mild to moderate nuclear atypia (SIL). PCR revealed that this lesion was related to HPV. Subsequently, the pap smear and cervical biopsy revealed a high-risk squamous intraepithelial lesion due to high-risk HPV. *Conclusions:* This report demonstrates that tissue obtained from VPT cannot be considered normal "a priori" and that a histological study can be useful to provide new information regarding a woman's gynecological health.

Key words: bcl-2; Voluntary pregnancy termination (VPT); Histological examination; Polymerase chain reaction amplification (PCR).

Introduction

In 1977, the World Health Organization (WHO) defined abortion as "the expulsion or extraction from its mother of a fetus or embryo weighing 500 g or less" [1].

Currently, abortion is defined as the spontaneous termination of pregnancy prior to viability of the fetus [1]. Induced abortion is a legalized voluntary abortion, which allows the interruption of an unwanted pregnancy, mainly on the basis of the woman's physical or psychological condition [2, 3].

Currently, there is no general agreement about the value of histologic examination of tissue obtained from spontaneous or voluntary pregnancy termination (VPT) [4].

An unusual histologic finding in tissue obtained from VPT is reported in order to demonstrate the utility of pathologic examination of this specimen thus providing new information regarding a woman's gynecological health.

Case Report

A 30-year-old woman with a history of a depression was referred to the gynecology clinic for VPT in the eighth week of gestation.

Material obtained from uterine cavity curettage was macroscopically and histologically examined. On macroscopic examination, the material contained clots and fragments of placental tissue.

Histological examination revealed immature villi with post-abortive hydropic degeneration and the presence of a small fragment of cervical mucosa with a squamous intraepithelial lesion characterized by mild to moderate atypia (SIL) (Figures 1a and 1b).

Polymerase chain reaction amplification (PCR) was performed to evaluate the presence of human papilloma virus (HPV) DNA in the neoplastic epithelium of the cervical mucosa. For DNA extraction, 4-µm-thick histological sections were stained with hematoxylin and examined under a stereomicroscope. PCR amplification was performed with the L1 consensus primers Gp5+/Gp6+ [5], giving an expected PCR product size of 150 bp: these primers have been developed to allow the detection of a broad spectrum of mucosotropic HPV genotypes (6, 11, 13, 16, 18, 30-35, 39, 40, 42, 45, 51-53, 56, 58, 61, 66). Most of these genotypes are correlated with lesions of high oncogenic risk (16, 18, 45, 56 and 58).

Molecular study by PCR amplification of different dilutions of tumor DNA revealed a positive signal for HPV DNA in the cervical lesion (Figure 1c).

After one month, a cervical smear was performed and was consistent with a high-risk squamous intraepithelial lesion (HSIL).

Subsequently, two small biopsies of the cervical tissue confirmed the diagnosis of HSIL (Figure 1d), with over-expression of thep 16 protein on immunohistochemical analysis.

Six months postoperatively, on colposcopic examination and pap smear study, the cervix was healing well.

Conclusions

SIL of the cervix is characterized by abnormal cellular proliferation, maturation and cytologic atypia of the cervical epithelium. The spectrum of epithelial alterations

Revised manuscript accepted for publication July 26, 2007

Fig. 1a

Fig. 1b

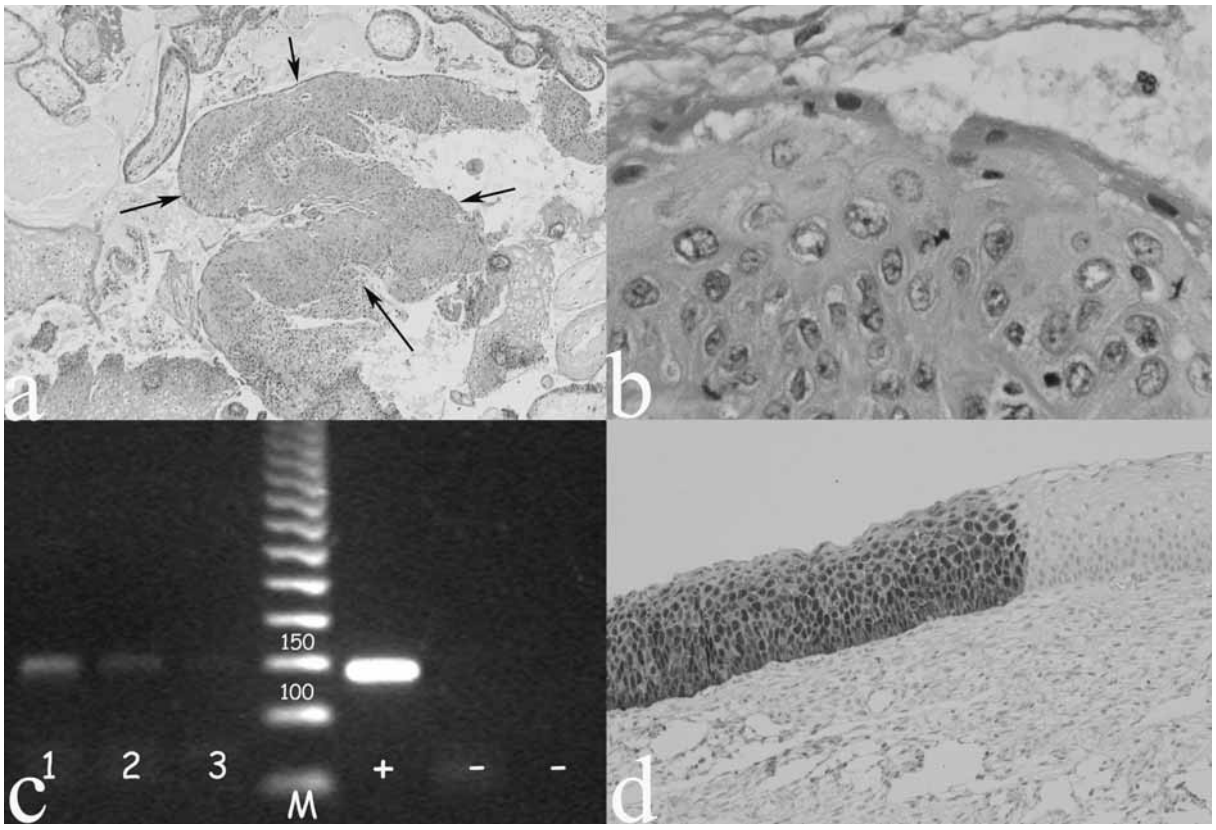

Fig. 1c

Fig. 1d

Figure 1. — a) A small fragment of cervical mucosa is evident among immature hydropic villi (H&E x 40) (arrows); b) Squamous intraepithelial lesion characterized by mild to moderate atypia in cervical epithelium on major magnification (H&E x 400); c) Results of HPV-PCR amplification using the L1 consensus primers Gp5+/Gp6+, Lanes 1-3: tumoral DNA at three different dilutions with positive signal for HPV DNA; Lane M: DNA molecular weight standard; Lane +: HPV-positive control; Lanes -: negative control; d) Cervical biopsy with HSIL and overexpression of p16 protein on immunohistochemical study (x 100).

which constitute SIL are quantitatively classified into three categories: CIN grade 1, neoplastic cells occupying the lower third of the epithelium; CIN grade 2, neoplasm occupying two-thirds of the epithelium; and CIN grade 3, neoplastic cells occupying two-thirds to full thickness of the epithelium.

Clinically, both LSIL and HSIL are asymptomatic conditions and the diagnosis can be made by cytological or histological studies after colposcopic examination.

In the present case the presence of HPV DNA on PCR study and overexpression of the p16 protein on immunohistochemical analysis revealed that the HSIL was related to high-risk HPV, which could cause the progression of the lesion to invasive cervical cancer [6].

Moreover, this report demonstrates that tissue obtained from VPT cannot be considered normal "a priori" and that a pathological study can be useful to provide new information regarding a woman's gynecological health.

Acknowledgements

The Authors wish to thank Prof. Alex Gillan for revision of the English language and Mrs. Emilia Corradini for technical assistence.

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