CASE REPORT

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Genital Herpes in an Immunodeficient Patient: An Uncommon Cause of Isolated Cervicitis

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ABSTRACT Herpes simplex virus (HSV) infection is one of the common viral sexually transmitted diseases. Direct contact with mucosal surfaces or corroded skin surface is required for the infection to develop. While HSV type 1 is usually located in the orolabial region, HSV type 2 is transmitted by sexual activity and one of the main causes of genital ulcers. It is most commonly seen in external genitalia, but isolated herpetic cervicitis is a rare clinical entity. In immunocompetent individuals, the disease is localized and usually self-limited. However, in immunosuppressive conditions such as pregnancy, malignancy, chemotherapy, or steroid use, primary or recurrent herpes infection may cause multisystemic disease that leads to mortality. We reported herpes cervicitis without any lesion in the external genital area in a patient who received chemotherapy for breast cancer.

Keywords: Herpes genitalis; uterine cervicitis; herpes simplex virus 2; female urogenitale diseases

Herpes simplex virus (HSV)-1 and HSV-2 are members of the Herpesviridae family and contain a double-stranded DNA linear genome.[1] While HSV type 1 is usually associated with orolabial infections, HSV type 2 is transmitted by sexual activity (oral-anal-vaginal) and a common cause of genital ulcers. The disease is characterized by painful, multiple vesicular-ulcerative lesions localized in the area where the virus is acquired. Lesions are most commonly on the vulva and often bilateral. Although the main factor is HSV type 2, HSV type 1 has been increasingly isolated in genital lesions recently.[2] The clinical picture caused by both viruses is similar. It may range from mild local lesions to fatal multisystemic diseases such as hepatitis, pneumonitis, meningitis, or disseminated infection in immunosuppressed individuals, depending on the host's immune system. Neonatal herpes due to vertical transmission from the infected mother may result in the death of the newborn.

Although the risk of transmission is the highest when active lesions are present, possibly due to contact limitation in that situation, viral shedding often occurs through asymptomatic carriers. The use of condoms reduces the risk of transmission but does not provide absolute protection.[3]

CASE REPORT

A 34-year-old gravida 2 female patient presented with dyspareunia and postcoital bleeding for a month. The patient has been treating with multiagent chemotherapy due to invasive ductal breast cancer, and the last dose of treatment was given one month ago before the admission of our clinic. She had no previous history of genital herpes infection. There were no lesions of the external genitalia on physical inspection, but the speculum examination revealed widespread, 1-2 millimeter red-colored papular lesions on the hyperemic background in the cervix (Figure 1). The patient

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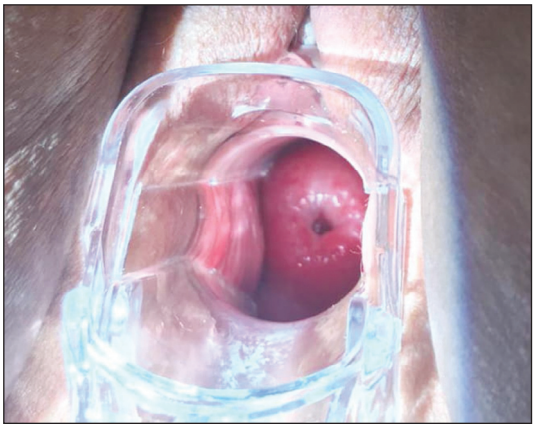

FIGURE 1: On speculum examination; widespread, small, red-colored papular lesions on the hyperemic background in the cervix were seen.

described severe pain during the examination, but vaginal discharge and inguinal lymphadenopathy were not detected. The ultrasound appearance of internal genitalia was normal. Herpetic cervicitis was considered clinically; a cervical swab for real-time polymerase chain reaction (PCR) examination was taken, and oral plus local antiviral therapy was initiated. A cervical punch biopsy was performed at the next examination to confirm the diagnosis due to the PCR assay's negative result. Intranuclear inclusions were detected in the squamous epithelium and inflammatory cells in histopathological sections consistent with the viral cytopathic effect (Figure 2). The patient was seen 2 weeks after commencement of antiviral therapy, and regression was observed in the cervical lesions and the patient's complaints. Antiviral therapy was continued, and one month after the first examination, the patient's symptoms have disappeared, and the cervix had a natural appearance (Figure 3).

The patient has given her written informed consent to publish her case (including publication of images).

DISCUSSION

Clinically, lesions that develop due to genital herpes infection are most common in the vulva and usually bilateral. It can also occur in the cervix, vagina, and perineum. Other symptoms may include dysuria, myalgia, headache, paresthesia in the lower extremities and perineum. Lesions were crusted and re-epithelized within 1-15 days, but viral excretion can continue for up to 3 weeks.[3]

The virus is transported to the dorsal root ganglia through free nerve terminals at the entrance area to the body. It remains in the host for life, causing latent infection and reactivation. These patients act as reservoirs for viral spread and transmission.

The diagnosis can be made clinically as a result of typical mucocutaneous lesions. Laboratory tests such as real-time PCR, virus isolation in cell culture, and tissue diagnosis may be required to reach the diagnosis in atypical patients. Although the sensitivity of PCR is higher than tissue culture, negative PCR does not exclude the diagnosis of herpes because the viral spread is intermittent.[4] Since the formation of type-specific immunoglobulins is over the course of 3 months in some individuals after primary infection,

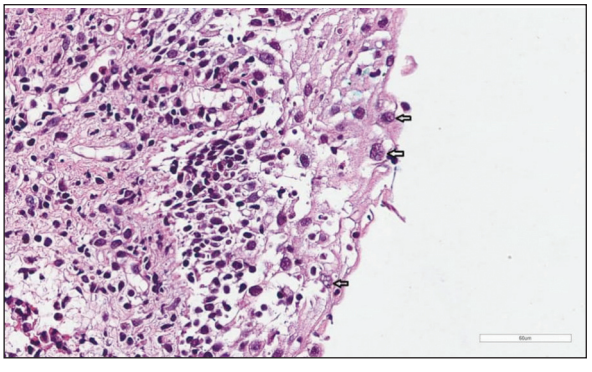

FIGURE 2: Squamous mucosa with herpetic viral changes; intranuclear inclusions and margination of chromatin.

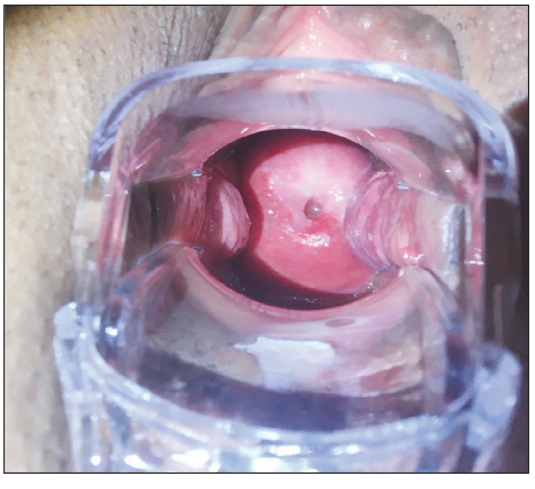

FIGURE 3: After the treatment, the patient's symptoms have disappeared, and the cervix had a natural appearance.

serological tests have a limited role in diagnosing acute infection and should not be used to start treatment.[3]

Orally administered antiviral drugs (acyclovir, valacyclovir, and famciclovir) are all effective therapies for genital herpes caused by HSV-1 or HSV-2, and they have similar efficacy and safety profiles. Intravenous administration should be used only when the patient is unable or intolerant of oral medications or severe disease, particularly in immunocompromised patients. Analgesics and warm sitz baths provide symptom relief, but topical antiviral therapy is less effective, easily generate resistance, and is not recommended.[5,6]

The asymptomatic viral spread is frequent in the first three months after primary infection. Patients should be informed about contagiousness and encouraged to use sexual abstinence and condoms, and offered testing for other sexually transmitted diseases.[7]

In conclusion, it is rare for women with genital herpes to see isolated lesions on the cervix without typical skin lesions. The cervix's appearance without herpetic vesicles can be similar to "strawberry cervicitis" and may be confused with bacterial vaginosis or cervicitis. However, the patient's description of dyspareunia and severe pain during the gynecological examination should be a warning for genital herpes, even if typical vesicular lesions are not observed. Since disseminated infection may also develop in genital herpes cases, early diagnosis and treatment are very important, especially in immunosuppressed patients.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Berkan Berk, Sevda Baş;* ***Design:*** *Berkan Berk, Sevda Baş;* ***Control/Supervision:*** *Sevtap Öncül Seyfettinoğlu, Mehmet Ali Narin;* ***Data Collection and/or Processing:*** *Berkan Berk;* ***Analysis and/or Interpretation:*** *Sevda Baş, Şahin Yüksel;* ***Literature Review:*** *Şahin Yüksel;* ***Writing the Article:*** *Berkan Berk, Sevda Baş;* ***Critical Review:*** *Sevtap Öncül Seyfettinoğlu, Mehmet Ali Narin;* ***References and Fundings:*** *Sevda Baş;* ***Materials:*** *Sevda Baş.*

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