Vaginal Discharge that Persisted for 6 Years

Dear Editor,

Abnormal vaginal discharge is one of the most common presenting complaints among women of a reproductive age group. Earlier, the discharge was treated under the umbrella term non-specific vaginitis; now, it is imperative that we find the cause before treating it. Various studies have shown bacterial vaginosis (BV), vulvo-vaginal candidiasis (VVC), and trichomoniasis to be the three most common etiological causes of vaginal discharge in Indian women.[1,2] Apart from these aerobic vaginitis, gonorrhea and other non-specific urogenital infections are the rarer infectious causes.[3] Among non-infectious causes of vaginal discharge, excessive elimination of physiological mucous material, presence of intravaginal foreign objects, malignancies, and atrophic vaginitis compete the list.[4] However, despite the easy availability of bedside tests to diagnose vaginal discharge, we came across an entity that is overlooked leading to misdiagnosis. Herein, we report a case of vaginal discharge in a 32-year-old female that persisted for 6 years.

A 32-year-old, married lady presented with complaints of pain and erosion in the fourchette area of 2 months duration. She had been suffering from similar erosions for the past 2 years with relapse and remission. The patient gave a history of vaginal discharge of 6 years duration. The discharge was creamy-white in color with occasional foul smell associated with it [Figure 1]. The patient revealed that the discharge was cyclical with an increase in the luteal phase of cycle (post 12–14 days of cycle). There was associated with dyspareunia and pruritus of the local area. She had visited multiple practitioners with a plethora of treatments tried on her, which included many courses of oral and topical antifungals, oral secnidazole and tinidazole, intravaginal clindamycin, and oral steroids to which the patient had no to minimum improvement.

On examination, there was a 2 × 1 cm area of erosion in the fourchette. It was indurated and tender on palpation. There was a presence of creamy-white discharge which was oozing out of vaginal opening. A clinical differential diagnosis of vaginal trichomoniasis, aerobic vaginitis, vaginal candidiasis, and cytolytic vaginosis was considered.

A KOH smear was done, which did not reveal any fungal element. The pH of the vaginal secretion was 4.0. The Giemsa stain showed abundance of bacilli, squamous cells, and a few inflammatory cells [Figure 2]. The lactobacilli were covering the entire epithelial cells, giving an appearance of clue cells (false clue cells in this case). The wet mount done for trichomonas vaginalis was also negative. Following the bedside tests, a Gram stain was sent, which showed abundance of Gram-positive bacilli,

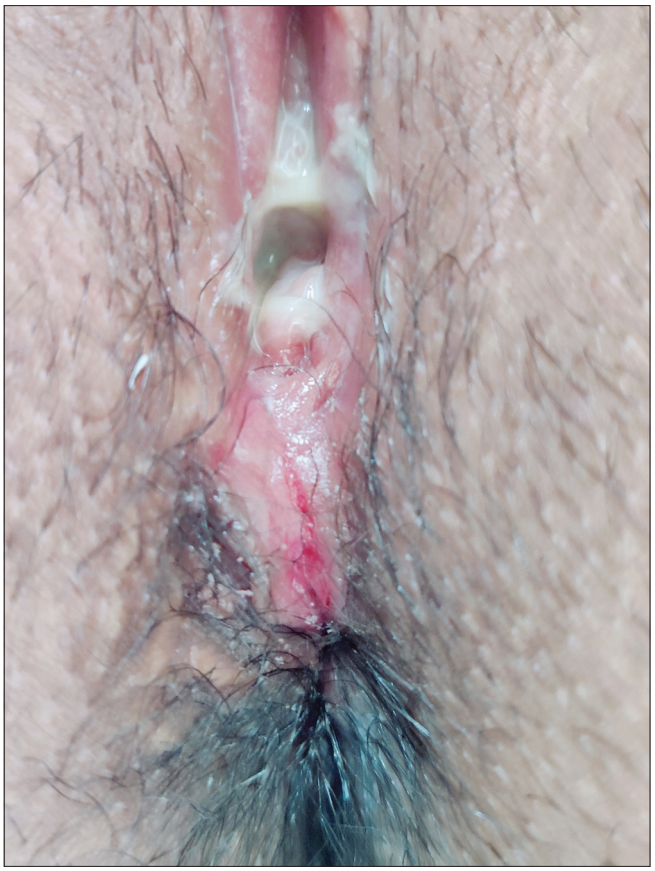

Figure 1: Creamy-white vaginal discharge with erosion in the fourchette

and culture showed growth of lactic acid bacilli (LAB). A cervical PAP smear was also done to rule out any malignant change, and the test was negative.

A diagnosis of cytolytic vaginosis (CV) was considered and to find out the cause for the same; a colposcopy was done by the gynecologist, which revealed the presence of cervical ectropion [Figure 3].

In this case, cervical ectropion was causing the vaginal pH to change; hence, the patient was advised to undergo cervical conization. Post conization, the discharge completely stopped. The irritant reaction in the fourchette area subsided with the use of topical steroids and emollient. Furthermore, the absence of vaginal discharge helped in faster healing of the fourchette, and there is no recurrence for the past 6 months.

Cytolytic vaginosis is a common but frequently misdiagnosed entity. It is a commonly missed condition when we consider differential diagnosis for vaginal discharge.

The condition is usually thought of in case the discharge persists and does not get relieved despite adequate medication.

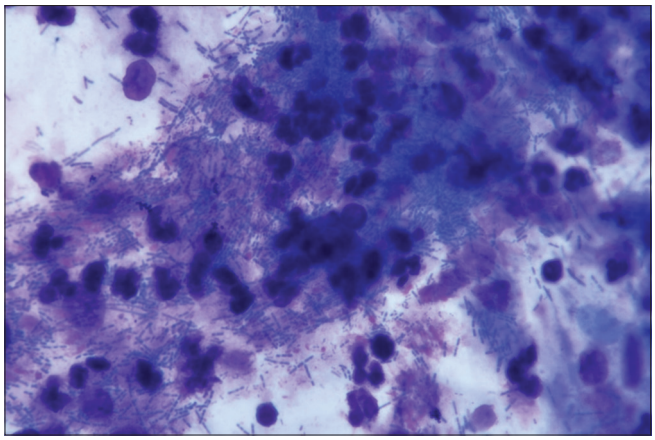

Figure 2: Giemsa stain showing abundance of bacilli, a few neutrophils, and smudged epithelial cells with lactobacilli adhering to epithelial cells (false clue cells) (100x)

CV was earlier known as Doderlein's cytolysis. However, in 1991, Cibley and Cibley renamed it as cytolytic vaginosis. The authors believed that the condition is due to overgrowth of lactobacilli, which in turn was attributed to vaginal hyperactivity leading to altered pH.[5] The proposed diagnostic criteria are mentioned in Table 1. In 2015, Hu *et al.* tried to further refine the diagnostic criterion by making it more objective. They proposed a more stricter microscopic criteria for CV: >1000 lactobacilli per oil immersion field as the criteria for CV, with <50% fragmented epithelial cells denoting mild and >50% fragmented cells denoting severe CV.[6] However, this is yet to be validated and there is no correlation between the patient's symptoms and amount of lactobacilli. Sanches *et al.* have found that women with CV have higher concentration of lipids; however, they too failed to give a clinical significance.[7]

There have been very few papers published on diagnosis and management of CV till now. The estimated prevalence rate is between 1.8% to 26.7% in different populations.[8,9] Hormonal preparations (contraceptives and replacements) cause increased load of lactobacilli and hence can lead to CV.

CV presents clinically as vaginal discharge, pruritus, dyspareunia, and vulvar dysuria with aggravation or relapse in symptoms in the luteal phase. It is characterized by vaginal pH between 3.5 and 4.5. There is lysis of vaginal epithelial cells and fragmented cells and the presence of naked nuclei as evidence of cytolysis in the vaginal smear. However, there are no clear criteria or definitions for recognition or quantification. Even though cytolysis has been proposed by almost all the authors as one of the main features, wet mount of women with trichomonas infection and a few uninfected women have also shown this feature.[10,11] In our case, the patient had cyclical vaginal discharge, dyspareunia, and localized pruritus. The pH was acidic, and there was a lack of inflammatory infiltrate with overgrowth of lactobacilli, giving the appearance of false clue cells (lactobacilli covering the squamous epithelium). Normally, the non-keratinized stratified squamous epithelium of the vagina is rich in glycogen, and it is converted to lactic acid by lactobacilli, which leads to an acidic environment in the vagina with a pH of 4.0 to 4.5. This physiological acidic pH is a deterrent for other

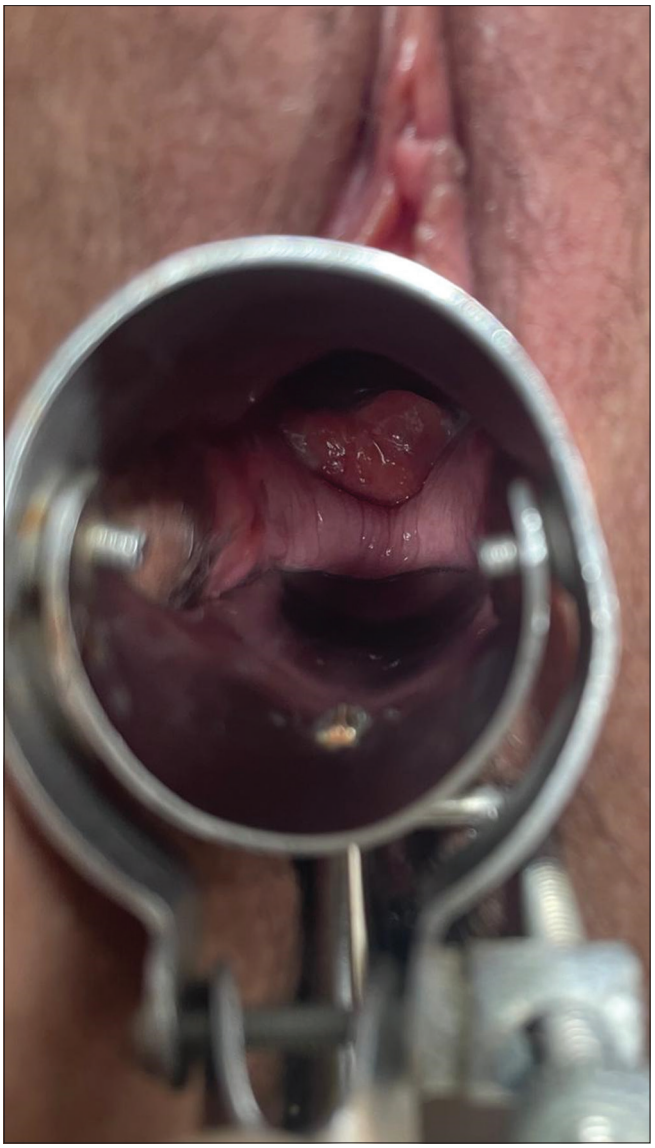

Figure 3: Colposcopy revealing cervical ectropion

Table 1: Diagnostic criterion of Cytolytic Vaginosis as proposed by Cibley and Cibley

A high index of suspicion
An absence of trichomonads, gardnerella, or candida on wet smear
An increased number of lactobacilli
A paucity of white blood cells
Evidence of cytolysis with bare or naked intermediate nuclei
A pH of 3.5 to 4.5
An abnormal vaginal discharge

microbes, hence having a protective effect in women. However, in CV, the overgrowth of lactobacilli causes the vaginal microenvironment to be acidic, which damages the vaginal epithelium and causes cytolysis. This in turn leads to vaginal discharge and other symptoms. In our case, the cervical ectropion led to increased secretion into vagina, especially during ovulation and the luteal phase, which might have led to altered vaginal microbiota and an increase in lactobacilli. Hence, the patient responded to cervical conization and did not have any recurrence of symptoms post the surgery.

The management of CV has not been mentioned in Centers for Disease Control and Prevention (CDC) and European (IUSTI/WHO) International Union against sexually transmitted infections (IUSTI) World Health Organisation (WHO) guidelines for vaginal discharge. Individual authors have suggested that making the vaginal pH alkaline by using sodium bicarbonate douches will be helpful, but no dosage and schedule have been described in the literature.

The case highlights the importance of bedside diagnostic tests as wet smear and Giemsa in the correct diagnosis of vaginal discharge. This also underscores the fact that CV, even though uncommon, must be thought in the differential diagnosis of non-responding vaginal discharge.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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