Best Practice & Research Clinical Obstetrics and Gynaecology 28 (2014) 1042–1050

Contents lists available at ScienceDirect

Best Practice & Research Clinical Obstetrics and Gynaecology

journal homepage: www.elsevier.com/locate/bpobgyn

9

Desquamative inflammatory vaginitis

Orna Reichman, MD, MSCE [a, *],
Jack Sobel, MD, Chief, Professor of Medicine [b, 1]

[a] Dept. of Obstetric and Gynecology, Shaare Zedek medical Center, Hebrew University, Jerusalem, Israel
[b] Division of Infectious Diseases, Detroit Medical Center, 3990 John R – 5 Hudson, Detroit, MI 48201, USA

Keywords:
desquamative inflammatory vaginitis
purulent vaginitis

Desquamative inflammatory vaginitis (DIV) is an uncommon form of chronic purulent vaginitis. It occurs mainly in Caucasians with a peak occurrence in the perimenopause. Symptoms and signs are nonspecific; DIV is a diagnosis of exclusion, and other causes of purulent vaginitis should be excluded. The main symptoms include purulent discharge, vestibulo-vaginal irritation, and dyspareunia. Examination of vaginal walls shows signs of inflammation with increased erythema and petechiae. Through microscopy (wet mount) of the vaginal secretions, DIV is defined by an increase in inflammatory cells and parabasal epithelial cells (immature squamous cells). Vaginal flora is abnormal and pH is always elevated above 4.5. Although etiology and pathogenesis remain unknown, the favorable response to anti-inflammatory agents suggests that the etiology is immune mediated. Either local vaginal clindamycin or vaginal corticosteroids are adequate treatment. As a chronic condition, maintenance treatment should be considered as relapse is common.

Introduction

Vaginal symptoms suggestive of vaginitis such as vaginal itching, discharge, and dyspareunia are common reasons for women to visit gynecological clinics [1]. In spite of the high prevalence of such complaints, one of three patients will be undiagnosed [2]. Desquamative inflammatory vaginitis (DIV)

* Corresponding author. Tel.: +972 2 6555562; Fax: +972 2 6666053.
E-mail addresses: Orna.reich@gmail.com (O. Reichman), jsobel@med.wayne.edu (J. Sobel).
[1] Tel: +1 (313) 745 7105; Fax: +1 (313) 993 0302.

http://dx.doi.org/10.1016/j.bpobgyn.2014.07.003
1521-6934/

is an uncommon severe form of chronic purulent vaginitis causing discharge, vestibulo-vaginal irritation, and dyspareunia [3,4]. It occurs mainly in Caucasians and although diagnosed in a wide age range, its occurrence peaks in perimenopausal women [4,5,6]. Diagnosis is based on a detailed medical history, physical examination, and wet mount (office-based microscopy). The symptoms and signs are nonspecific and may require the use of vaginal culture, polymerase chain reaction (PCR), rare use of blood tests (hormone levels), and infrequent histology only to exclude other causes of vaginal inflammation. Unfortunately, such thorough evaluation does not often occur in primary gynecological clinics, and the ability to estimate the true prevalence of DIV in the general population is limited. By contrast, specialized studies in vulvovaginal clinics estimate the incidence of DIV as 0.8–4.3% of referred cases. This incidence likely reflects a referral or accrual bias [5,6,7]. The etiology is unknown. There are only 29 published articles in the English literature (as of August 2013) of which seven (24%) are case reports and series and eight (28%) are reviews. The majority of the original studies (10 all together) are mainly retrospective descriptive studies. (Table 1).

History

The term "desquamative inflammatory vaginitis (DIV)" was first introduced in 1965 when Gray and Barnes described six women from a group of 478 consecutive patients with vaginal complaints who had a "reddened" vagina and "numerous pus cells … with oval and round parabasal cells." Cultures were sent for all six patients and two were positive for *Trichomonas vaginalis.* [7] The authors concluded that the other four had an *"interesting form of vaginitis … seems to represent a clinical entity … and the true nature is not clear."* [7] The definition was refined only 3 years later when Gardner published his milestone case series of eight patients titled "Desquamative inflammatory vaginitis: a newly defined entity." [3] All eight patients presented with purulent discharge and demonstrated ecchymotic vaginal spotting and desquamation of vaginal walls. A microscopy evaluation of vaginal discharge showed increased inflammatory cells with excess of parabasal cells and lack of lactobacilli. Vaginal pH was universally elevated. Notably, there was poor response to antimicrobial treatment and

Table 1
Publications of desquamative inflammatory vaginitis.

Basic science	Original study	Case reports case series	Review	Image/letter to editor
Shaw JL (Biol Chem.2008)	Nyirjesy P (J Low Genit Tract Dis. 2012)	Pereira N (J Low Genit Tract Dis. 2013)	Frey Tirri B.(Curr Probl Dermatol. 2011)	Paavonen J. (Infect Dis Obstet Gynecol. 1996)
	Van der Meijden (J Low Genit Tract Dis. 2012)	Peacocke M. (Cutis. 2010)	Stockdale CK. (Curr Infect Dis Rep. 2010)	Gardner HL. (Am J Obstet Gynecol. 1969)
	Sobel JD (Obstet Gynecol. 2011)	Peacocke M. (Cutis. 2008)	Quan M. (Postgrad Med. 2010)	Hannon TR. (Am J Obstet Gynecol. 1969)
	Bradford J (J Low Genit Tract Dis. 2010)	Jacobson M (J Reprod Med. 1989)	Edwards L. (Dermatol Clin. 2010)	
	Murphy R. (Dermatol Ther. J Reprod Med. 2008)	Gardner HL. (Am J Obstet Gynecol. 1968)	Nyirjesy P. (Curr Infect Dis Rep. 2007)	
	Nyirjesy P (Obstet Gynecol. 2006)	Gray LA (Am J Obstet Gynecol. 1965)	Fowler RS. (J Reprod Med. 2007)	
	Thomson JC.J Reprod Med. 2005	Scheffey LC (Am J Obstet Gynecol. 1956)	Murphy R. (Dermatol Ther. 2004)	
	Newbern EC. (Ann Epidemiol. 2002)		Oates JK (Genitourin Med. 1990)	
	Donders GG. (BJOG. 2002)			
	Sobel JD. (Am J Obstet Gynecol. 1994)			