Journal of Interdisciplinary Histopathology
www.scopmed.org
DOI: 10.5455/jihp.20160517083824

Case Report

Cytomegalovirus endometritis in a non-immunosuppressed patient presenting as recurrent pyometra: A case report

Geetha Vasudevan[1], Pavithra Prabhakar[2], Shephali Sharma[2]

[1]Department of Pathology, Kasturba Medical College, Manipal, Karnataka, India, [2]Department of Pathology, Melaka Manipal Medical, College, Manipal, Karnataka, India

Address for correspondence:
Dr. Pavithra Prabhakar, Melaka Manipal Medical College, Manipal, Karnataka, India.
E-mail: drpavithra83@gmail.com

Received: March 18, 2016
Accepted: May 17, 2016
Published: May 31, 2016

ABSTRACT

Cytomegalovirus infection of the female genital tract is a rare entity. We present a case of 70-year-old woman who came with recurrent pyometra but was otherwise in good health. Hysterectomy was done, and the endometrium showed occasional stromal cells with karyomegaly and intranuclear eosinophilic inclusions consistent with cytomegalovirus infection and dense lymphoplasmacytic infiltrate. This was an incidental finding in an otherwise immunocompetent non-pregnant woman, hence being reported for its rarity and uncommon presentation.

KEY WORDS: Cytomegalovirus, endometrium, inclusions

INTRODUCTION

Cytomegalovirus (CMV) infection involving the female genital tract (FGT) has been reported by very few authors. CMV infection in pregnant women leading to abortion is a well-known condition. It is also reported in immunocompromised patients or as an incidental finding in immunocompetent persons as a part of disseminated infection or as an isolated infection [1]. We present a rare case of CMV endometritis in an elderly non-immunocompromised woman presenting as recurrent pyometra.

CASE REPORT

A 70-year-old woman presented with an abdominal pain since 1 year and fever of 1 month duration. On examination, the abdomen was soft and non-tender. An ultrasonography showed pyometra drainage of which was done twice under antibiotic coverage. The patient subsequently underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy. On gross examination, endometrial cavity contained gray-brown necrotic material; the endometrium showed pale patchy yellow foci. On microscopy, endometrium showed surface ulceration and foci of squamous metaplasia overlying atrophic glands, some with luminal neutrophils, eosinophils, stromal dense lymphoplasmacytic infiltrate and granulation tissue [Figure 1].

An occasional stromal cell with karyomegaly and eosinophilic intranuclear inclusion suggestive of CMV inclusion was seen in Figure 2. Cervix showed chronic cervicitis, squamous metaplasia with intraglandular extension. Bilateral ovaries and tubes were unremarkable both on gross and microscopy. The patient was asymptomatic on subsequent follow-up.

DISCUSSIONS

CMV belongs to the family herpesviridae of betaherpesvirnae subfamily. It is also known as Human herpes virus 5 [2]. CMV is an important cause of mortality and morbidity in immunocompromised patients such as those with HIV/AIDS, transplant recipients on immunosuppressive therapy and malignant hematological disease. After primary infection with CMV, the virus becomes latent in multiple organs and can later be reactivated during the severe deregulation of the immune system. Reactivation of CMV has been reported in non-immunosuppressed patients such as severe trauma, sepsis, shock, burns, cirrhosis, and other critically ill patients [3]. CMV infection causing abortion in pregnant women has been reported [2].

Disseminated CMV infection of the FGT involving vulva, vagina, and cervix in immunocompromised patients has

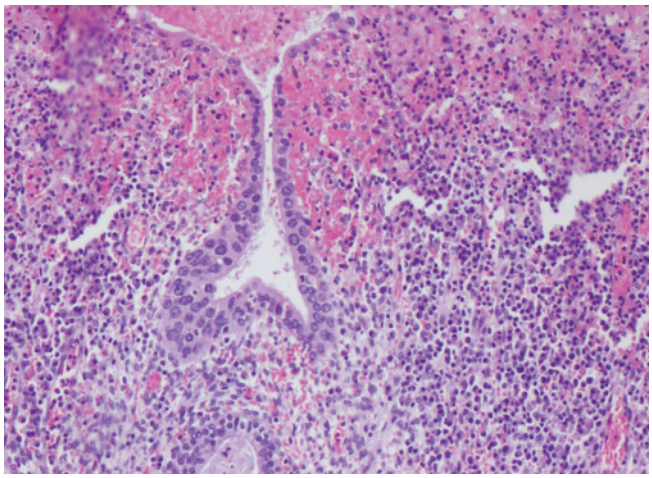

Figure 1: Endometrium showing surface ulceration, focus of squamous metaplasia, and stromal lymphoplasmacytic infiltrate (H and E, ×400)

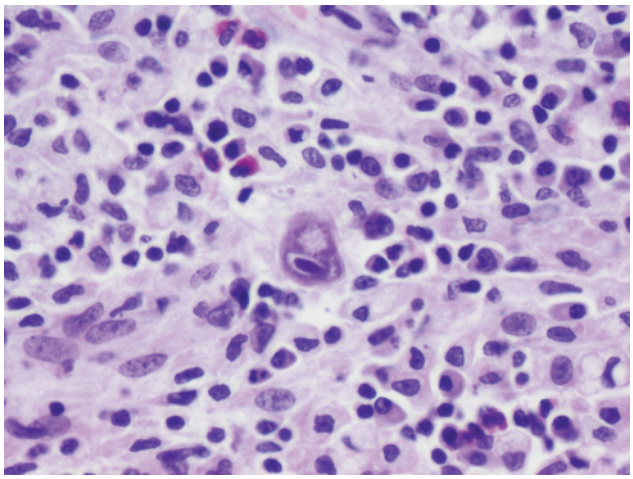

Figure 2: Stromal cell with karyomegaly and eosinophilic intranuclear viral inclusion (H and E, ×400)

been described by Friedman *et al*. [4]. Isolated cases of CMV cervicitis [5], endometritis [6], salpingitis [1], and oophoritis [7-9] have been described.

Morphological features of CMV infection of the FGT were described in five biopsies from four immunocompetent patients by McGalie *et al*. They reported intracytoplasmic eosinophilic viral inclusions in endocervical glandular epithelial cells, endothelial, and mesenchymal cells [5]. Other ancillary findings as reported by them include mixed inflammatory infiltrate composed of neutrophils and lymphoid follicles, fibrin thrombi along with glandular epithelial cells showing vacuolation and reactive changes. Wenckebach and Curry reported a case of CMV endometritis showing lymphoid follicles with germinal center [10].

Some workers have reported chronic endometritis with ill-defined non-necrotizing granulomas in patients with systemic CMV infection. Endometrium did not show characteristic CMV inclusions, however, the same was seen in the cervix. CMV DNA was detected in paraffin blocks using polymerase chain reaction [11].

CONCLUSION

In this case, the patient was an immunocompetent, non-pregnant, elderly woman presenting with recurrent pyometra. CMV inclusion bodies were detected incidentally in a background of chronic endometritis. This case is being reported in view of its rarity and uncommon presentation.

REFERENCES

1. Fpathfu WA, Nausheen Y, Fpathkfu RA, Khudairi AA, Nemenqani D. Histopathological features of an incidental case of cytomegalovirus salpingitis in a patient with inflammatory bowel disease. J Pak Med Assoc 2013;63:780-3.
2. Sana A, Wahab A. CMV incidence in pregnant women with recurrent abortion. J Bioanal Biomed 2012;4:101-3.
3. Jain M, Duggal S, Chugh TD. Cytomegalovirus infection in non-immunosuppressed critically ill patients. J Infect Dev Ctries 2011;5:571-9.
4. Friedmann W, Schäfer A, Kretschmer R, Lobeck H. Disseminated cytomegalovirus infection of the female genital tract. Gynecol Obstet Invest 1991;31:56-7.
5. McGalie CE, McBride HA, McCluggage WG. Cytomegalovirus infection of the cervix: Morphological observations in five cases of a possibly under-recognised condition. J Clin Pathol 2004;57:691-4.
6. Dehner LP, Askin FB. Cytomegalovirus endometritis: Report of a case associated with spontaneous abortion. Obstet Gynecol 1975;45:211-4.
7. Subietas A, Deppisch LM, Astarloa J. Cytomegalovirus oophoritis: Ovarian cortical necrosis. Hum Pathol 1977;8:285-92.
8. Yu J, Solano FX Jr, Seethala RR. Bilateral cytomegalovirus (CMV) oophoritis mimicking widely metastatic carcinoma: A case report and review of the literature. Diagn Pathol 2007;2:50.
9. Sharma TM, Nadasdy T, Leech RW, Kingma DW, Johnson LD, Hanson-Painton O. *In situ* DNA hybridization study of 'primary' cytomegalovirus (CMV) oophoritis. Acta Obstet Gynecol Scand 1994;73:429-31.
10. Wenckebach GF, Curry B. Cytomegalovirus infection of the female genital tract. Histologic findings in three cases and review of the literature. Arch Pathol Lab Med 1976;100:609-12.
11. Frank TS, Himebaugh KS, Wilson MD. Granulomatous endometritis associated with histologically occult cytomegalovirus in a healthy patient. Am J Surg Pathol 1992;16:716-20.

Source of Support: Nil, Conflict of Interest: None declared.