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Cytomegalovirus Colitis Leading to Recto-vaginal Fistula in Immunocompetent Patien

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Abstract Cytomegalovirus (CMV) is a double-stranded DNA virus member of Herpesviridae family. Majority of the population is exposed to CMV, based on sero-prevalence. CMV establishes latent infection and may re-activate later and cause significant clinical manifestations, especially in immunocompromised patients, like those on immunosuppressant drugs and chemotherapy, post organ transplantation and acquired immunodeficiency syndrome. The clinical manifestations of CMV in immunocompetent people are due to primary infection and vary from mild and self-limiting to severe and debilitating. CMV colitis in immune-competent people is uncommon. The complication of CMV infection leading to colonic perforation and recto-vaginal fistula is rare in immunocompetent subjects. We report case 67 year old female who was admitted with road traffic accident with tibia and T10 vertebral fracture without any abdominal injury. She underwent spinal fixation. She later developed diarrhea with abdominal pain. Whilst investigations were underway, she developed signs of intestinal obstruction. Urgent CT scan of abdomen and pelvis confirmed intestinal obstruction with rectal perforation. Urgent laparotomy was done which confirmed diagnosis of recto-vaginal iula. Adhesiolysis and Hartmann's procedure was performed. Intraoperative biopsy specimen of the rectum confirmed the diagnosis of CMV. She recovered after undergoing rehabilitation and treatment with Ganciclovir. She is awaiting reversal of colostomy.

Keywords: *CMV, fistula, immunocompetent, immunocompromised*

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1. Case Presentation

A 67-year-old lady with background history of hypertension, diabetes mellitus and Hyperlipidemia was admitted for road traffic accident leading to fracture of left tibial plateau and T12 vertebral body. She was taking Metformin 500 mg BD, with HBA1c of 6.7.

She underwent open reduction and internal fixation for the tibial fracture. Her T12 vertebral compression fracture was treated with T10-12 posterior instrumentation and stabilization.

She was transferred to in-patient multidisciplinary rehabilitation. During this period, she developed dirrhoea leading to perianal excoriation and urinary retention. Full blood count, electrolytes were done along with stool examination was done for microscopy, culture and sensitivity and clostridium. Initially she was hydrated and treated symptomatically. She was catherised for skin integrity whilst awaiting the results of investigations.

Her abdominal pain worsened over next 48 hours and clinical examination done during this time revealed; abdominal tenderness and absent bowel sounds.

The laboratory investigations were: CRP -100 (<0.3), WBC -21(4-10), absolute neutrophil 18.9 (2-7.5), Hemoglobin 9.8(11.5-15.0).

Urgent CT scan of abdomen and pelvis was done which showed: features suggestive of recto-sigmoid perforation with few extra luminal air pockets in the vicinity and small bowel obstruction. Tethering of several dilated small bowel loops to the rectal region related to recto sigmoid perforation and free fluid in the pelvis. Cystogram was normal. (Figure 1: gas in the vaginal cavity).

Prior to urgent laparotomy, the clinical findings revealed: posterior wall defect on per vaginal examination.

During laparotomy: the intraoperative findings were dense omental and small bowel adhesions. Rectovaginal fistula about 5 cm defect, no anterior rectal wall.

Adhesiolysis and Hartmann's procedure along with purse string of anal junction was performed. Posterior vaginal wall was closed. She also received course of valganciclovir.

The biopsy findings were: appendix: unremarkable appendix with acute serositis. No evidence of malignancy.

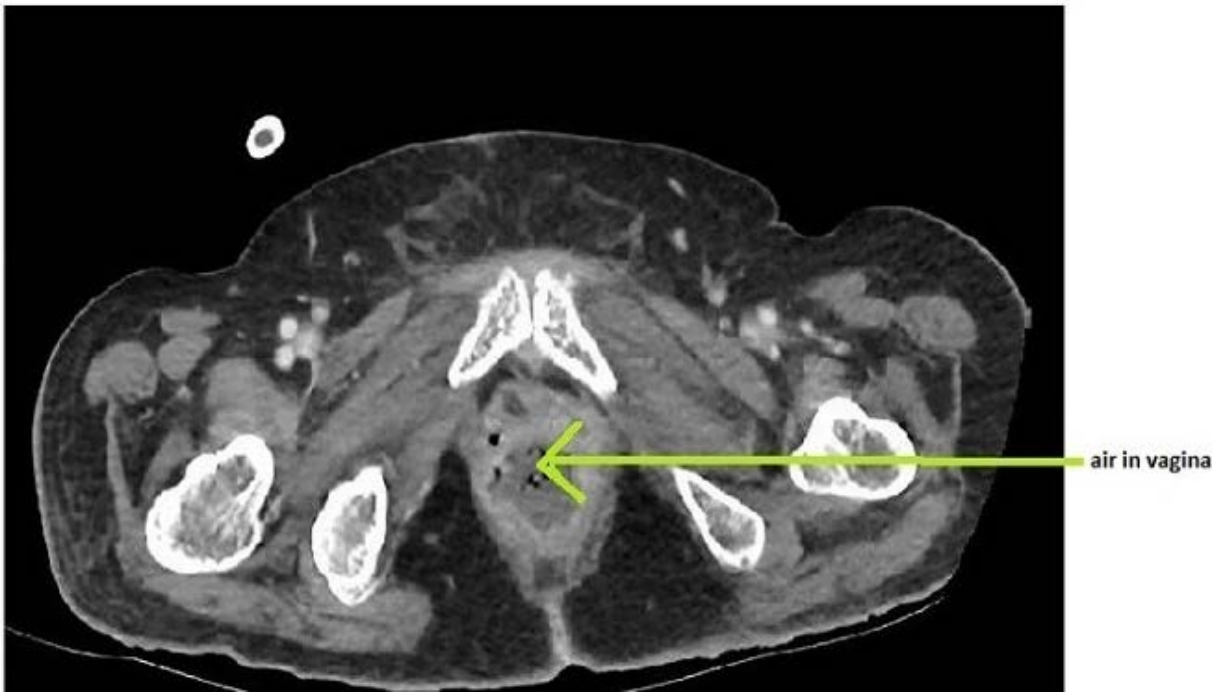

Figure 1.

Rectum: trans mural necrosis, extensive mucosal ulceration. Florid granulation tissue formation and acute serositis. Scattered large atypical cells with enlarged nuclei, prominent nucleoli and intranuclear inclusions were noted in granulation tissue. Immunohistochemical stain for CMV was positive in these inclusions. No evidence of vasculitis.

Outcome: she recovered well during her subsequent rehabilitation stay and was discharged home. With closure of colostomy in near future planned.

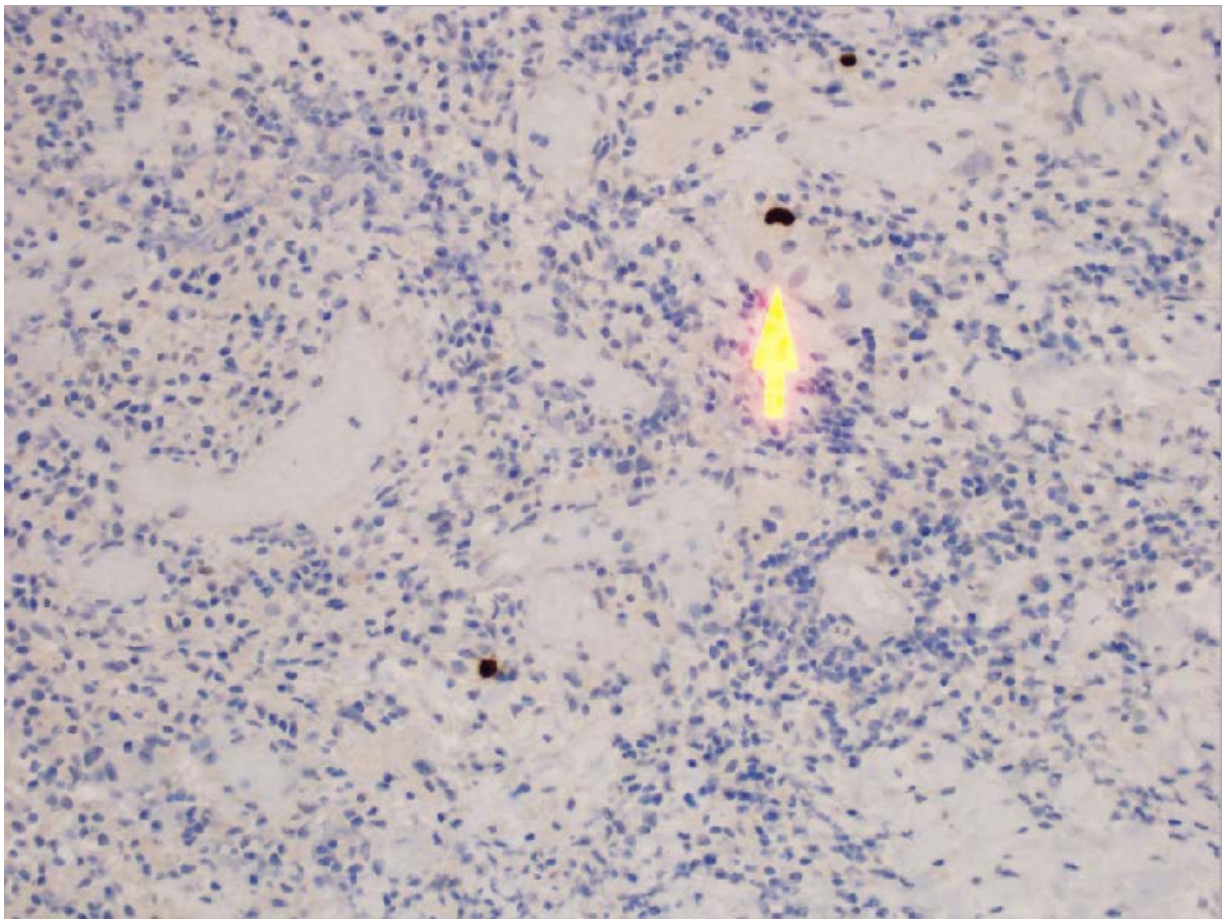

Figure 2.

2. Discussion

CMV in immunocompetent people is not as rare as previously thought. The increased recognition of the syndromes as caused by CMV may be due to improved diagnostic techniques like PCR, immunohistochemistry [1].

In immunocompetent people, the infection is less well-studied and thought to be mild and self-limiting illness, the role of antiviral treatment in these patients; the dose and duration are not well-established [1]. In majority of the cases, the infection is likely self-limiting. However, antiviral treatment should be initiated, weighing benefits vs. adverse effects from treatment [1], which includes bone marrow suppression, altered renal function, seizures.

Gastrointestinal tract (GIT) involvement is the most common site for CMV infection, leading to gastroenteritis, duodinitis, colitis, proctitis and exacerbation of pre-existing inflammatory bowel disease [1,2,3,4].

Common presentations of CMV colitis are diarrhoea, abdominal pain and fever, rarely profuse gastrointestinal hemorrhage. In CMV patients with GI symptoms, the mortality rate has been reported to be between 6.2 to 31% [1]. Patients with IBD are more prone CMV infections and for complications as a result of CMV colitis, i.e., mega colon, fistula, perforation and peritonitis [1].

The probable reason for presence of CMV in the colon with IBD may be related to bowel wall inflammation leading to cytokine release further resulting in activation of CMV replication [2,5]. CMV colitis leading to perforation and fistula formation in patients in absence of IBD is rare [1,2,3].

Literature search revealed: only few case reports of CMV colitis associated fistula in HIV/AIDS patients [6,7,8,9].

References

[1] Rafailidis PI, Mourtzoukou EG, Varbobitis IC, Falagas ME. Severe cytomegalovirus infection in apparently immunocompetent patients: a systematic review. Virol J, 2008; 5:47.

[2] Galiatsatos P, Shrier I, Lamoureux E, Szilagyi A. Meta-analysis of outcome of cytomegalovirus colitis in immunocompetent hosts. Dig Dis Sci. 2005; 50: 609-16.

[3] Karakozis S, Gongora E, Caceres M, Brusn E, Cook J W. Life-threatening cytomegalovirus colitis in the immunocompetent patients: report of the a case and review of the literature. Dis Colon Rectum.2001; 44:1716-20.

[4] Patra S, Samal SC, Chacko A, Mathan VI, Matham MM. Cytomegalovirus infection of the human gastrointestinal tract. J Gastroenetro Hepatol. 1999; 14:973-6.

[5] A.L. Goodman, C.D.Murray, J Watkins et.al. CMV in the gut: a critical review of CMV detection in the immunocompetent host with colitis. Eur J Clin Microbiol Infect Dise. 2015; 34:13-18.

[6] Gill RS, Taylor G, Penner RM, et al. Enterocolic fistula: a rare presentation of cytomegalovirus infection. Can J Infect Dis Med Microbiol. 2012; 23:0.

[7] Boru, ML.Cytomegalovirus infection causing an enterocitaneous fistula in a patient with acquired immunodeficiency syndrome. Dig Dis Sci.1997; 42:2603-2605.

[8] Asif T, Hasan B, Likhitsup A, Bamberger D. Colovesical fistula: An Unusual Complication of Cytomegalovirus Colitis. Cureus. 2017 Jul5; 9(7):e1426.

[9] Rao S, Pande S D, Hussain R, Ang D, Seah J. Clinical Presentations of Cytomegalovirus Infection in Immunocompetent Hosts. Journal of Tropical Diseases. October. 2018.