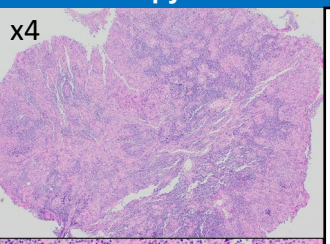
An Unusual Manifestation of Cytomegalovirus Colitis as a Tumour in an Immunocompetent Adult

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Abstract of Case Study

- We report a rare phenomenon of cytomegalovirus (CMV) colitis presenting as a malignant appearing tumour in an immunocompetent adult.
- A 77-year-old female presented to Accident & Emergency with a 4-day history of abdominal pain, diarrhoea, anorexia and weight loss of 6kg within 3 months.
- Blood tests showed a raised faecal immunochemical test result of 200 micrograms of haemoglobin per gram of faeces.
- A Computed Tomography scan showed ileocaecal valve (ICV) thickening and enlarged ileocaecal lymph nodes.
- A colonoscopy revealed a malignant appearing ileocaecal valve tumour, which was biopsied showing CMV colitis and inflammatory granulation tissue.
- The patient was managed conservatively as an outpatient and showed spontaneous complete resolution of symptoms.
- A repeat colonoscopy and biopsy of the ileocaecal valve 8 months later showed complete resolution of the changes. Repeat CMV immunohistochemistry was negative.

Microscopy and Colonoscopy



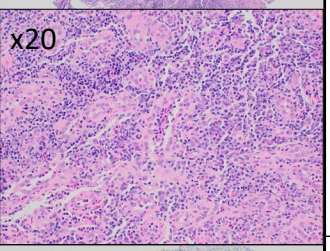
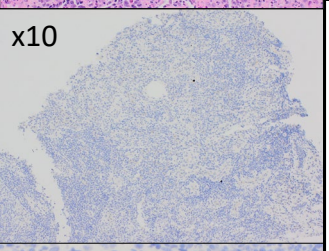


Figure 1: Initial biopsies: H&E:
Biopsies revealed extensive ulceration and replacement by acutely inflamed granulation tissue. A few remaining colonic crypts were present and showed focal cryptitis. No definite viral inclusions were seen on H&E. There was no evidence of malignancy.



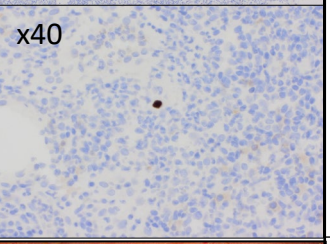


Figure 2: Immunhistochemistry
CMV immunohistochemistry highlighted occasional, enlarged, strongly positive nuclei compatible with CMV colitis. An AE1/3 revealed no evidence of occult malignancy. The inflammatory infiltrate showed a reactive immunophenotype with an admixture of CD20 positive B-lymphocytes and CD3 and CD5 positive T-lymphocytes.



Figure 3: Colonoscopy
Colonoscopy revealed a malignant appearing ileocaecal valve tumour

Discussion

- Fewer than 25 cases of CMV-associated gastrointestinal pseudotumor have been reported in the literature (2), mostly in immunocompromised individuals.
- A recent meta-analysis of CMV colitis identified only 44 reported cases in immunocompetent individuals over the preceeding 23 years (1), highlighting the exceptional rarity of this case.
- CMV colitis ordinarily occurs in immunocompromised individuals including those with HIV or post transplant and post-chemotherapy immunosuppression.
- It has also been associated with Clostridium difficile colitis in immunocompetent individuals with idiopathic inflammatory bowel disease (IBD)(3, 4).
- It ordinarily presents with diarrhoea, fever, abdominal pain and haematochezia (4). However, in this case, it presented as a malignant appearing ICV tumour in an immunocompetent individual.
- The individual concerned had no pre-existing diagnosis of IBD. Stool culture was not performed, so it was not possible to exclude C.difficile infection in this instance.
- This case underlines the importance of recognising that CMV colitis may present as a malignant appearing mass in immunocompetent individuals. We have shown that having a high index of suspicion for CMV colitis in colonic mass lesions may prevent unnecessary sampling and ultimately avoid surgical intervention and associated morbidity/ mortality (2).
- It is important that histopathologists have a low threshold for requesting CMV immunohistochemistry in such cases. This can lead to patients being successfully treated conservatively including with antiviral therapy.
- There have been cases in which, although biopsies only showed replacement by inflammatory granulation tissue, the endoscopic, imaging and clinical features of the case created a persistent concern for malignancy with the patient ultimately colonic resection showing CMV related pseudotumour (2).
- The case we report was self-limiting: The patient was managed conservatively with complete resolution of symptoms.
- Biopsies taken 2 months later showed mild active chronic colitis with negative CMV immunohistochemistry.
- Biopsies taken 8 months later of the ileocaecal valve showed normal colonic mucosa.

Conclusion

CMV colitis related pseudotumour may present in immunocompetent individuals, mimicking colorectal carcinoma clinically, endoscopically and radiologically. It is important that histopathologists and clinicians maintain a high index of suspicion for CMV colitis, and histopathologists adopt a low threshold for performing CMV immunohistochemistry. This avoids unnecessary resections for this rare entity that can show complete resolution with conservative management.

Kind thanks to Dr Salma Al-Ramadhani for the photos of the biopsies.

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