CMV - The troll of transplant and its complications among post liver transplant recipients

M.T. Alif Adlan[1], P.R. Anuradha[1], O Haniza[2], T Soek Siam[2], M Suryati[3], Mohanasundram Pillai[3]
[1]Infectious diseases unit, [2]Hepatology department, [3]Hepatobiliary department, Selayang Hospital

INTRODUCTION

Cytomegalovirus (CMV) has been an important immune-modulating virus affecting organ transplant recipients, contributing directly and indirectly to both morbidity and mortality in these patients. We describe 3 cases which developed early and late complications indirectly due to CMV disease.

OBJECTIVES

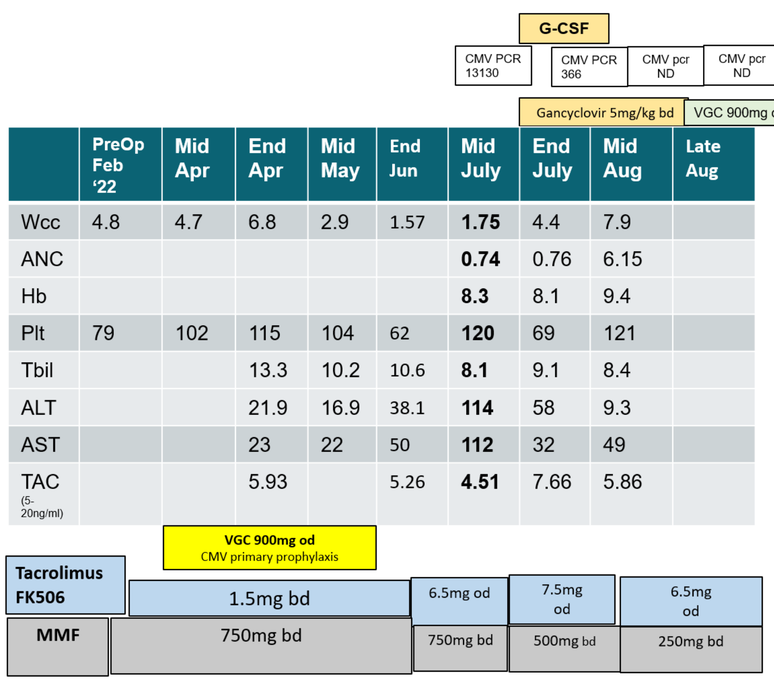
1. To describe various clinical presentations of CMV disease.
2. To describe role of CMV serostatus is an important factor for CMV reactivation that can lead to disease and malignancy, especially among donor seropositive and recipient seronegative CMV.

METHOD

We describe 3 post liver transplant patients of varying periods, consisting of 2 high risk CMV serostatus D+/R- (donor seropositive, recipient seronegative) and 1 intermediate risk CMV serostatus D+/R+ (donor and recipient seropositive). The D+/R- patients had developed diseases - one diagnosed as CMV colitis and the other diagnosed as CMV oesophagitis. The D+/R+ patient had pancytopenia complicated with liver abscess.

RESULTS

Despite given valganciclovir as CMV prophylaxis for 3 months, these liver transplant patients still developed complications of CMV disease. All 3 patients were treated with IV ganciclovir for longer than 2 weeks with at least 2 undetectable CMV quantitative PCR viral load 1 week apart. All had good outcomes apart from a high risk CMV serostatus (D+/R-) patient with CMV oeseophagitis, as she had been diagnosed with squamous cell carcinoma of the head scalp, likely due role of CMV implicated as a potential risk for malignancy.



32 y/o lady
cadaveric liver transplant mid Feb '22
CMV IgG D+/R+

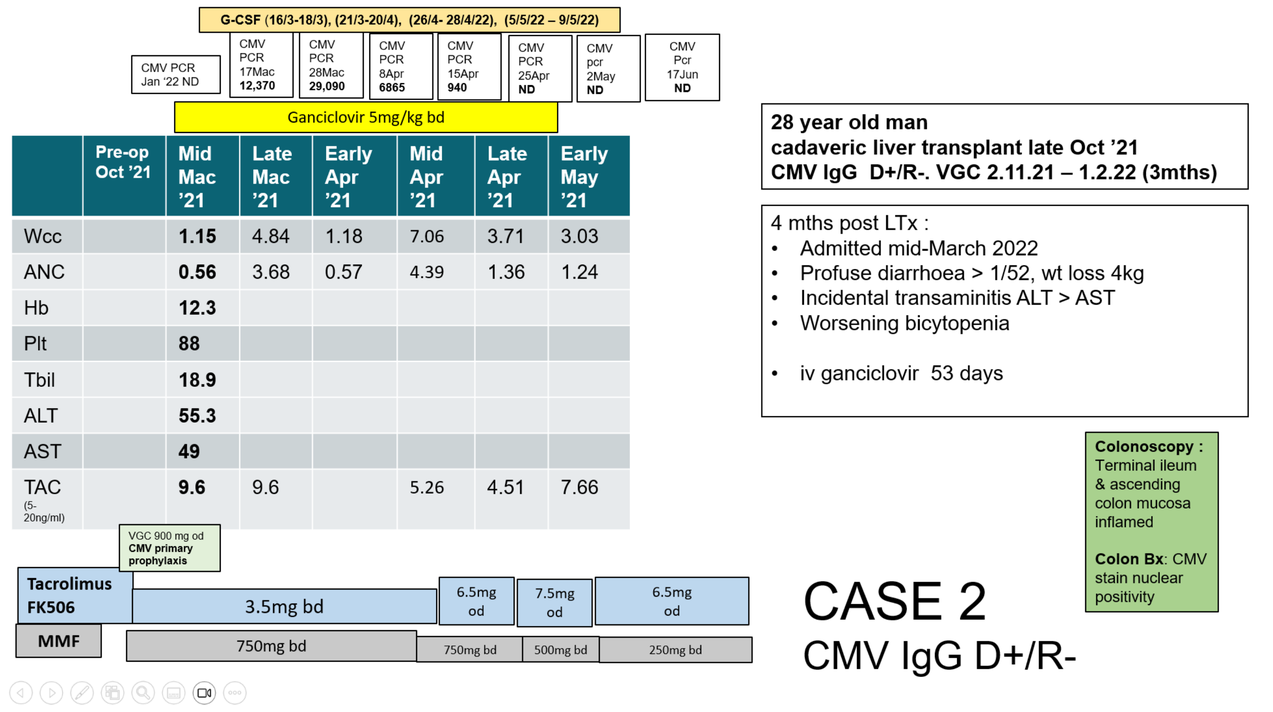
5 mths post LTx:
- Admitted mid-July 2022 fever x 2/7
- Incidental transaminitis ALT > AST
- Persistent pancytopaenia
- iv ganciclovir 5mg/kg bd x ~3/52
- Blood c&s and perihepatic fluid c&s
  No growth

US abdomen : segment VI subcapsular collection 4.3 x 6.1 x 10.6cm -drained

→

US abdomen : segment VI subcapsular collection 2.1 x 3.9 cm -drained

CASE 1
CMV IgG D+/R+



28 year old man
cadaveric liver transplant late Oct '21
CMV IgG D+/R-. VGC 2.11.21 – 1.2.22 (3mths)

4 mths post LTx :
- Admitted mid-March 2022
- Profuse diarrhoea > 1/52, wt loss 4kg
- Incidental transaminitis ALT > AST
- Worsening bicytopenia

- iv ganciclovir 53 days

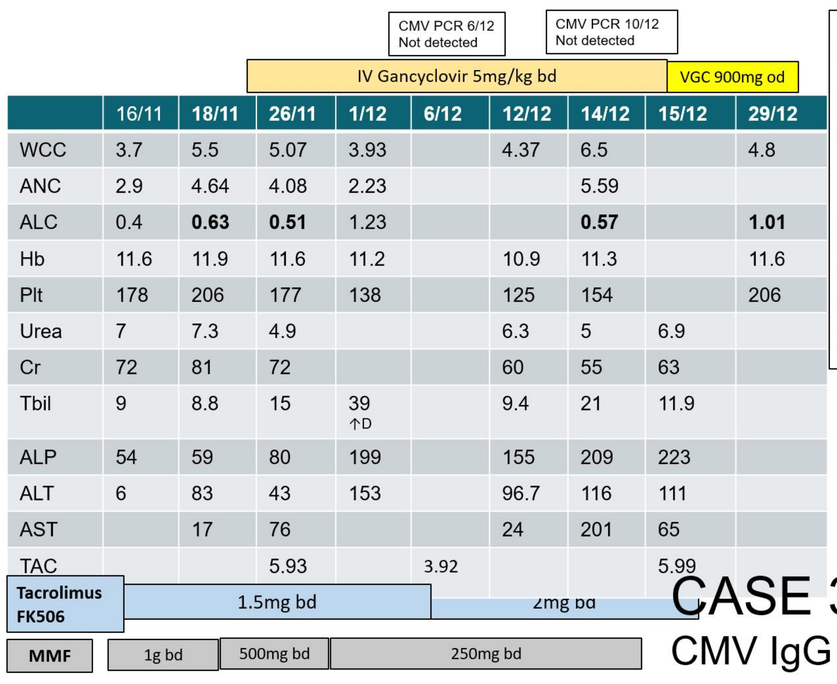
Colonoscopy : Terminal ileum & ascending colon mucosa inflamed

Colon Bx: CMV stain nuclear positivity

CASE 2
CMV IgG D+/R-

DISCUSSION

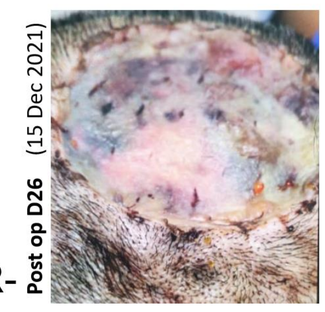
Treatment duration of gastrointestinal CMV disease should be patient-specific, and guided by virologic and clinical improvement. If CMV viremia is present, at least two consecutive negative CMV PCR must be taken 1 week apart to ensure viral clearance prior to antiviral discontinuation. Consideration should be made for reduction in immunosuppressive therapy to the lowest possible safe dose, especially in patients with severe CMV disease, non-response to therapy, high viral load, or leukopenia.



59 year old lady

1. **Autoimmune hepatitis** 2003
   Cadaveric liver transplant June 2015
2. **Limited Systemic Sclerosis 2005**
   (now on pred 5mg) calcinosis, Raynaud's, reflux oesophagitis
3. **PVD + atherosclerosis**

Admitted Nov 2021 for ulcerative scalp lesion x 2mths & dysphagia
OGDS Reflux esophagitis, **HPE CMV**
Scalp biopsy : **Squamous cell CA**



CASE 3
CMV IgG D+/R-

REFERENCES

1. Razonable RR, Humar A. CMV in solid organ transplant recipients—guidelines of the American Society of Transplantation Infectious Diseases Community of Practice. Clinical transplantation. 2019 Sep;33(9):e13512.
2. Fishman JA. Infection in solid-organ transplant recipients. New England Journal of Medicine. 2007 Dec 20;357(25):2601-14.