Cytomegalovirus disease without viremia 6 years post kidney transplant: A case report.

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INTRODUCTION

Cytomegalovirus (CMV) viremia commonly precedes CMV disease[1]. Unlike CMV disease involving the renal allograft, gastrointestinal CMV disease may not always exhibit viremia[2]. We report a case of gastrointestinal tissue-invasive CMV disease without CMV viremia.

CASE REPORT

A 40-year-old Malay lady with type 2 diabetes mellitus and 6 years post spousal kidney transplantation, presented with intermittent, chronic, non-bloody diarrhoea associated with weight loss of 6kg over 6 months. Otherwise, she had no fever, vomiting, lymphadenopathy, abdominal pain, visual disturbances or respiratory symptoms. She developed acute kidney injury KDIGO 2, anaemia and erratic tacrolimus levels. Her immunosuppressants were mycophenolate sodium, prolonged-release tacrolimus and prednisolone at a stable dose for the past few years. Both the recipient and donor were seropositive for CMV IgG pre-transplantation. Of note, she had an episode of acute rejection in the immediate post transplant period requiring thymoglobulin.

Blood tests showed low inflammatory markers (C-reactive protein 17.4mg/L), normal thyroid function test, no identifiable organisms on stool microscopy and cultures. Her CMV polymerase chain reaction (PCR) was initially not detected. Oesophagoduodenoscopy and colonoscopy showed diffuse inflammation involving the oesophagus, stomach, duodenum, terminal ileum and colon with an ulcer at the terminal ileum. Histopathology examination reported diffuse colitis with viral inclusion body seen at the terminal ileum ulcer which stained positive for CMV immunohistochemistry (Figure 1). There was no evidence of malignancy. Ziehl-Neelsen stain was negative for acid fast bacilli. A repeat CMV PCR was detected at low levels (<165 IU/ml). Oral valganciclovir was initiated resulting in resolution of symptoms and blood parameters. Allograft biopsy was not done as her creatinine normalised with hydration from 206mcmol/L to 98mcmol/L.

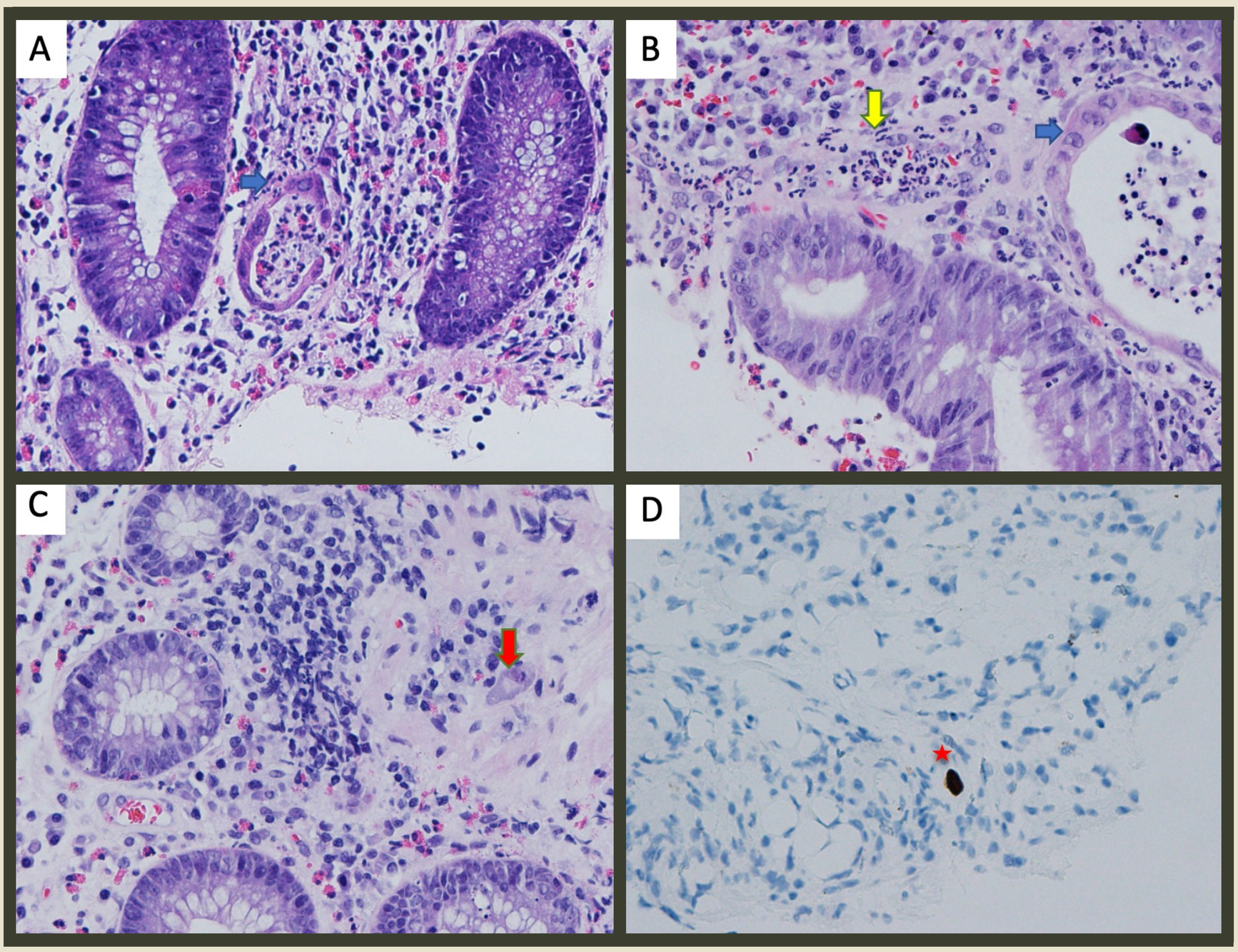

Figure 1.
A, B: Sections from colonic biopsy show dense inflammation with crypt abscess (blue arrow) and crypt destruction (yellow arrow) (H&E x40). C, D: CMV infected cell (red arrow) displaying large cell with both nuclear and cytoplasmic inclusions (H&E x40), positively stained with CMV monoclonal antibody (D, x40).

DISCUSSION

Besides hematopoietic progenitor cells, CMV can remain latent in endothelial cells with the capacity for cell to cell spreading and reactivation in immunosuppressive states[3]. Although incompletely understood, this could explain the negative CMV viral load despite extensive gastrointestinal disease. Unlike our patient, late-onset CMV disease is more common amongst sero-discordant (donor positive, recipient negative) recipients and those with recent episodes of rejection requiring intensification of immunosuppressants[4].

CONCLUSION

A high index of suspicion remains the mainstay of diagnosing gastrointestinal CMV disease especially when viral load is low or not detected. Accurate diagnosis leads to appropriate treatment to prevent allograft failure.

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