CASE REPORT

Patient with rheumatoid arthritis on methotrexate with multiple infecting organisms causing gastritis

Robert Husney,¹ Vladamir Privman,² Douglas Sepkowitz²

¹Maimonides Medical Center, Brooklyn, New York, USA
²SUNY Downstate Medical Center at LICH, Brooklyn, New York, USA

Correspondence to
 Dr Robert Husney,
 RHusney@maimonidesmed.org

SUMMARY

A 70-year-old man with a medical history of rheumatoid arthritis on methotrexate 2.5 mg every other day was being followed for cytomegalovirus (CMV) gastritis and *Helicobacter pylori* infection, who was also found to have adrenal masses bilaterally. A CT showed a 1 cm left adrenal nodule along with a 2.5 cm right adrenal mass suspicious for malignancy. A positron emission tomography showed metabolic activity in his adrenals that was non-specific (could be seen in benign as well as malignant lesions). The patient was started on valganciclovir 900 mg daily for 30 days. Following treatment the patient showed marked clinical improvement with a weight gain of 9 lbs and a complete resolution of his epigastric pain. A repeat oesophagogastroduodenoscopy performed with biopsy returned negative for CMV. A repeat CT abdomen to assess the adrenals was performed 2 weeks after completion of valganciclovir. His adrenal nodules had decreased significantly in size, with his left adrenal gland nodules measuring 1 cm and now his right adrenal gland nodule measuring 1 cm.

BACKGROUND

Cytomegalovirus (CMV) is a common virus that infects most people at some point during their lives but typically does not cause severe illness except in those with weakened immune systems.^{1 2} While reactivation of CMV is well known among HIV and transplant patients, its prevalence in patients receiving immunosuppressive therapy with systemic inflammatory diseases is unknown.³⁻⁶ CMV associated adrenalitis is also exceedingly rare to be associated with rheumatoid arthritis.⁷

To our knowledge this is the first case reported of rheumatoid arthritis associated with CMV, *Candida* and *Helicobacter* gastritis, all of which responded to appropriate therapy.⁸

CASE PRESENTATION

A 70-year-old man with a medical history of rheumatoid arthritis diagnosed 15 years prior, and on methotrexate 2.5 mg every other day, presented to our office after being diagnosed with CMV gastritis. The patient was initially seen by a gastroenterologist after reporting weight loss and epigastric pain that persisted for nearly a month. An oesophagogastroduodenoscopy (EGD) with biopsy was performed a week prior to presentation which showed *H pylori* infection along with *Candida* gastritis and CMV gastritis. The patient was prescribed fluconazole 100 mg daily, and combination amoxicillin, clarithromycin and lansoprazole (Prevpac) for

14 days. CMV was not thought to be a pathogen. His pain persisted after treatment. He was subsequently referred to infectious diseases for management of his CMV gastritis. On presentation, he was afebrile and with normal vital signs. His physical examination was remarkable for some mild epigastric tenderness. His plasma sodium and potassium were within normal range. The patient's methotrexate was stopped, a purified protein derivative (PPD) was placed and a CT abdomen ordered. The PPD was negative and his CT showed a 1 cm left adrenal nodule along with a 2.5 cm right adrenal mass suspicious for malignancy. A positron emission tomography (PET) showed metabolic activity in his adrenals that was non-specific (could be seen in benign as well as malignant lesions). A biopsy was considered but the patient requested medical therapy. The patient was started on valganciclovir 900 mg daily for 30 days. Following treatment the patient showed marked clinical improvement with a weight gain of 9 lbs and a complete resolution of his epigastric pain. A repeat EGD performed with biopsy returned negative for CMV. A repeat CT abdomen to assess the adrenals was performed 2 weeks after completion of valganciclovir. His adrenal nodules had decreased significantly in size, with his left adrenal gland nodule measuring 1 cm and now his right adrenal gland nodule measuring 1 cm. The plan was to restart his methotrexate at the same dose and also resume valganciclovir. A repeat CT of the abdomen was to be performed in 8 weeks to assess the size of the remaining adrenal nodules.

TREATMENT

The patient was prescribed fluconazole 100 mg daily, and combination amoxicillin, clarithromycin and lansoprazole (Prevpac) for 14 days. His pain persisted after treatment. He was subsequently referred to infectious diseases for management of his CMV gastritis. On presentation, the patient's methotrexate was stopped, a PPD was placed, and a CT abdomen ordered. The PPD was negative and his CT showed a 1 cm left adrenal nodule along with a 2.5 cm right adrenal mass suspicious for malignancy. PET showed metabolic activity in his adrenals that was non-specific (could be seen in benign as well as malignant lesions). Biopsy was considered but the patient refused. The patient was started on valganciclovir 900 mg daily for 30 days.

OUTCOME AND FOLLOW-UP

Following treatment the patient showed marked clinical improvement with a weight gain of 9 lbs and

To cite: Husney R, Privman V, Sepkowitz D. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2013-009194

a complete resolution of his epigastric pain. A repeat EGD performed with biopsy returned negative for CMV. A repeat CT abdomen to assess the adrenals was performed 2 weeks after completion of valganciclovir. His adrenal nodules had decreased significantly in size, with his left adrenal gland nodule measuring 1 cm and now his right adrenal gland nodule measuring 1 cm.

DISCUSSION

To our knowledge this is the first case reported of a patient on chronic immunosuppression for rheumatoid arthritis who developed multiple coinfections with *Candida*, CMV and *Helicobacter* gastritis.

Learning points

- ▶ Cytomegalovirus (CMV) may be a cofactor in potentiating infections resulting in greater than one simultaneous infection.
- ▶ CMV reactivation may occur in patients who have rheumatoid arthritis and are on even low-dose immunosuppressive agents. A high clinical suspicion must be maintained.
- ▶ Valganciclovir should be attempted in patients with suspected CMV of the adrenals prior to biopsy.
- ▶ A 30 day course of valganciclovir appears to be sufficient in inducing a clinical response to patients with systemic CMV reactivation.
- ▶ CMV adrenalitis resulting in significant adrenal gland size may not normalise or may lag behind clinical improvement.

Contributors RH with assistance from VP and DS wrote this unique case report for publication. RH reviewed articles through PubMed search and began writing the case report. DS was actively involved in oversight of the case. VP reviewed multiple times the case report and the information within it. He provided valuable insight from the perspective of an endocrinologist. DS was the primary infectious disease doctor who managed the patient described in the case report. He reviewed the case report multiple times for its accuracy and content.

Competing interests None.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Lortholary O, Deny P, Boudes P, *et al*. Bilateral adrenal hypertrophy in an AIDS patient with multivisceral human cytomegalovirus infection. *J Infect Dis* 1990;161:585–6.
- 2 Rafailidis PI, Mourtzoukou EG, Varbobitis IC, *et al*. Severe cytomegalovirus infection in apparently immunocompetent patients: a systemic review. *Viral J* 2008;5:47.
- 3 Dowling JN, Saslow AR, Armstrong JA, *et al*. Cytomegalovirus infection in patients receiving immunosuppressive therapy for rheumatologic disorders. *J Infect Dis* 1976;133:399–408.
- 4 Boerbooms AM, Kerstens PJ, van Loenhout JW, *et al*. Infections during low-dose methotrexate treatment in rheumatoid arthritis. *Semin Arthritis Rheum* 1995;24:411–21.
- 5 Cohen JL, Corey GR. Cytomegalovirus infection in the normal host. *Medicine (Baltimore)* 1985;64:100–14.
- 6 Michaux C, Morlat P, Bonnet F. Cytomegalovirus and other herpes virus infections in systemic diseases. *Presse Med* 2010;39:34–41.
- 7 Rüttimann S, Hilti P, Spinass GA, *et al*. Adrenal cortex and gonadal function in HIV infected patients. *Wien Med Wochenschr* 1991;141:248–52.
- 8 Korac M, Bmbolic B, Salemovic D. Diagnostic EGD in patients with AIDS related GI abnormalities. *Hepatogastroenterology* 2009;56:1675–8.

Copyright 2013 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow