CYTOMEGALOVIRUS INFECTIONS IN PATIENTS RECEIVING IMMUNOSUPPRESSION FOR ANCA-ASSOCIATED VASCULITIS: A MULTICENTRE CASE SERIES

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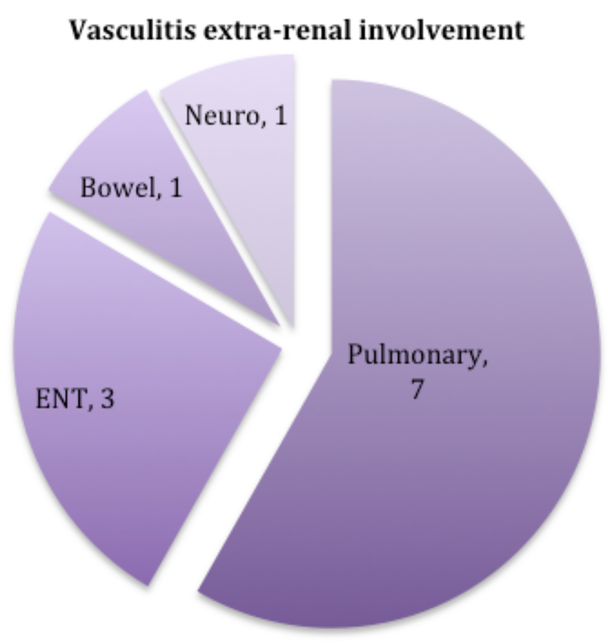
INTRODUCTION AND AIMS: There are well established protocols for surveillance and management of cytomegalovirus (CMV) in solid organ and hematopoietic stem cell transplant patients but not for patients with ANCA-associated vasculitis (AAV). We sought to retrospectively identify incidence of CMV in patients with AAV.[1,2]

METHODS: We reviewed the medical records and microbiological databases of 11 cases of CMV infection in patients from two tertiary renal referral centres with either a new diagnosis or relapse of AAV with renal involvement. Study period was 1st Jan 10 - 1st Oct 16.

RESULTS: Median age of patients was 73 (interquartile range (IQR) = 11). 8 female and 3 male. All had positive ANCA serology; MPO (n=7), PR3 (n=4). All had renal involvement which was biopsy proven in 10 patients. 7 required hemodialysis. Extra renal involvement is demonstrated.



All received methylprednisolone plus cyclophosphamide (median dose = 2150mg, IQR = 5400mg, excluding 1 patient where doses unclear and 1 patient where given subsequently). 1 patient also received azathioprine, mycophenolate mofetil and rituximab, in chronological order. 7 patients had plasma exchange (median total volume = 27L, IQR = 10.7L).

CMV was diagnosed within 28 days of the last dose of cytotoxic agent in 8 patients, 2 patients were diagnosed at 51 and 93 days and 1 patient was diagnosed prior to cytotoxic drug, but after high dose steroids.

Indication for CMV testing included:

- **pulmonary symptoms (n=6)**
- **gastro-enteric symptoms (n=5)**
- **systemic symptoms (n=4)**
- **without clearly documented reason (n=2).**

2 patients had life-threatening gastrointestinal haemorrhages requiring blood transfusion.

CMV infection caused either a delay or reduction in the total amount of immunosuppression given in 7 out of 11 patients. 6 patients required additional inpatient stay due to CMV infection, either a new admission (n=4, mean stay was 26 days) or prolonged admission (n=2).

	Days from AAV Dx	Days from last dose cytotoxic	Why tested		What organ suspected			Initial log	Tissue/other sample positive	eGFR at CMV Dx	Lympho-cyte count +/- 2 weeks
			Symptoms	Systemically unwell	Lung	Bowel	Other				
1	312	93	1	0	1	0	0	5.64	0	32	0.4
2	57	12	1	0	0	1	0	3.68	0	HD	0.8
3	42	22	1	0	1	0	0	3.87	Bronchial washings	8	0.8
4	28	10	1	1	1	0	0	4.41	Sputum culture	HD	0.4
5	54	51	1	0	1	0	0	3.12	0	17	1.7
6	55	10	1	1	1	0	Oral ulcers	6.46	0	11	0.11
7	17	6	0	0	0	0	Unclear	4.4	0	HD	0.16
8	2225	16	1	0	0	1	0	4.74	Oesophageal biospy	14	0.28
9	5078	13	0	0	0	0	Unclear	3.84	0	52	1.2
10	20	15	1	1	0	1	0	2.77	Rectal biopsy	HD	0.2
11	5	Preceeded	1	1	1	0	0	3.77	0	HD	1.23
Median	**54**	**14**						**3.87**			**0.4**
IQR	**160.5**	**10**						**0.85**			**0.76**

CONCLUSION: CMV manifests in patients undergoing treatment for AAV, causing morbidity, hospitalization, increased length of stay and a delay or reduction in immunosuppression. This case series highlights that, in the aim of improving patient safety and developing our clinical practice, more routine screening for CMV in AAV may be indicated. The use of CMV prophylaxis for patients at risk needs to be further explored.

REFERENCES: 1. Emery, V., Zuckerman, M., Jackson, G., Aitken, C., Osman, H., Pagliuca, A., Potter, M., Peggs, K., Clark, A. and The British Committee for Standards in Haematology, the British Society of Blood and Marrow Transplantation and the UK Virology Network (2013), Management of cytomegalovirus infection in haemopoietic stem cell transplantation. Br J Haematol, 162: 25–39. **2.** British transplant society (2011). The prevention and management of CMV disease after solid organ transplantation. 3rd Edition. Transplantation; 92: 1181-7.

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