

Bridging the knowledge gap: cytomegalovirus (CMV) awareness in the kidney transplant community

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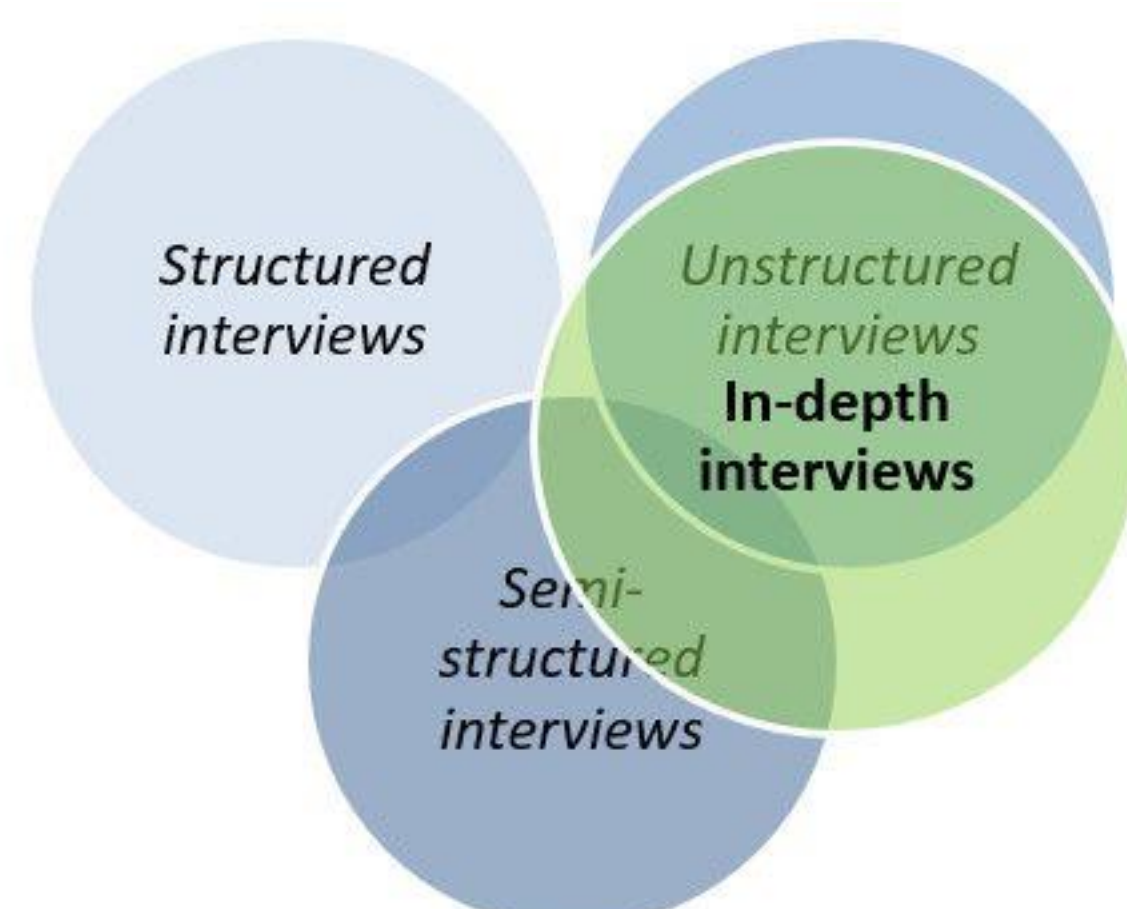


Background

- Cytomegalovirus (CMV) is one of the most common opportunistic infectious complications of solid organ transplantation, with a 1- year incidence of up to **31.3%** in donor positive, recipient negative (**D+/R-**) populations and **3.2%** in donor negative, recipient negative (**D-/R-**) populations.
- The clinical spectrum ranges from asymptomatic viraemia, to non-specific symptoms such as fever, night sweats, fatigue and myalgia, and ultimately to **tissue-invasive disease** including retinitis, colitis and pneumonitis.
- Post-transplant infection with CMV is associated not only with the aforementioned sequelae, but can also significantly increase the risk of **graft rejection**, premature **graft failure** and **mortality**.
- Despite its ubiquity and potentially devastating consequences, there is currently **no data** exploring the **kidney transplant** patient experience of CMV.

Methods

- We performed semi-structured interviews with 50 adult recipients who had undergone kidney transplantation within the last two years in our centre.
- Participants were divided into two groups: those who had experienced CMV (CMV group, n=25) and those who had not (non-CMV group, n=25).
- Transcripts were analysed using a combination of qualitative and quantitative techniques to generate data across three themes: awareness of CMV and its management, effect of CMV infection on quality of life and efficacy of current treatment.



Results

Poor awareness of CMV:

- 60% did not remember receiving information on CMV prior to transplant.
- 23% would recognise the symptoms in themselves.
- Participants rated overall worry about CMV as 2.5 out of 10 on 10 point Likert scale.

Limited Impact of CMV

- 85% did not recall experiencing any CMV related symptoms

Effective management of CMV

- Participants rated the efficacy of CMV treatment as 9.5/10.

Need for further education on CMV

- 82% of participants thought that more should be done to inform kidney transplant recipients about CMV.

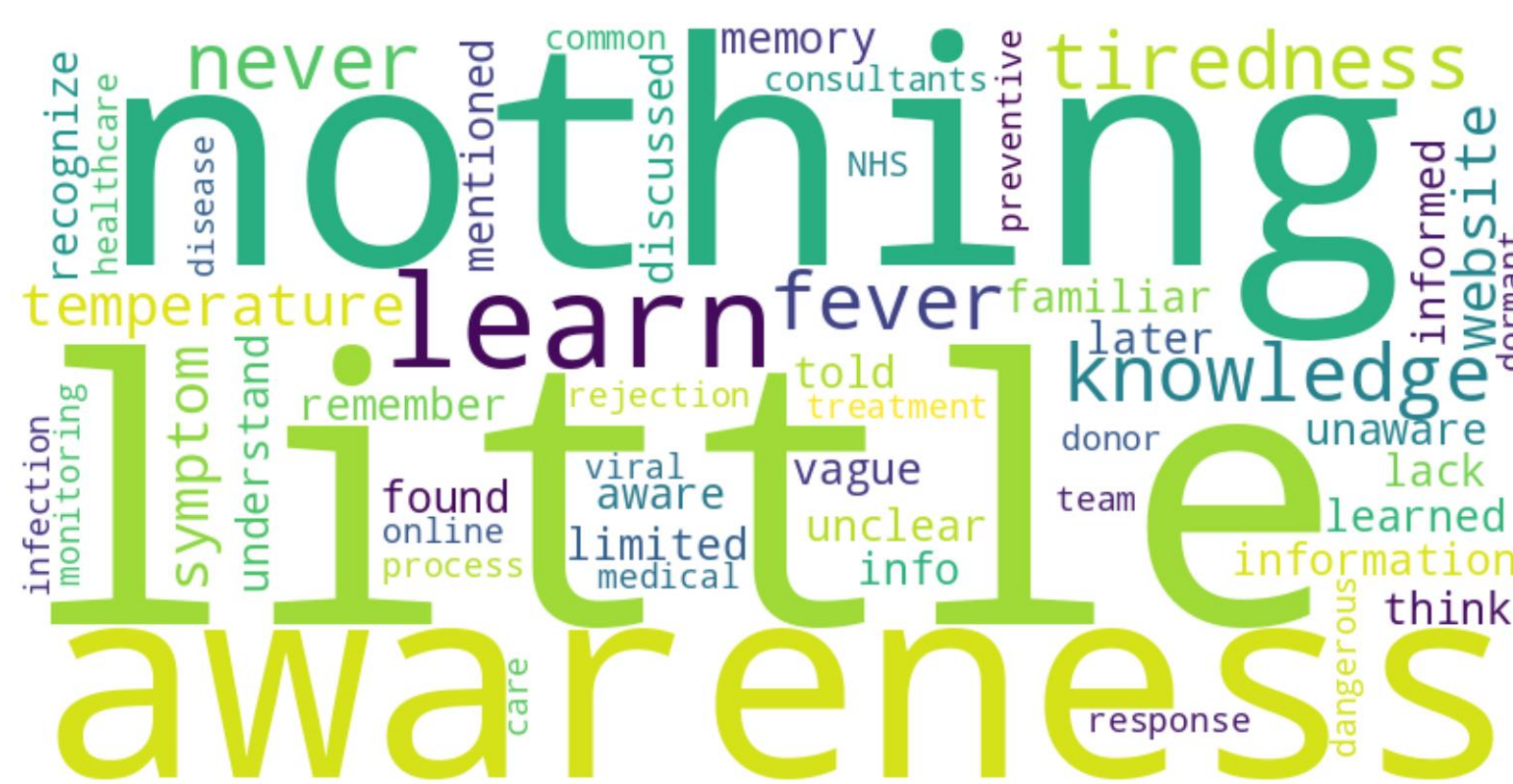


Figure 1. Word cloud of terms used by participants to describe their knowledge and awareness of CMV. The figure was generated by analysing interview transcripts using Python's 'WordCloud' library (version 1.8.1) on October 29th 2024. The size of each word is proportional to its frequency, ranging from n=1 ("vague") to n=18 ("nothing").

Interview Question	CMV (n = 25)	Non-CMV (n = 25)	P-Values
Number of participants who worried about the impact of CMV on their overall health (%)	16 (64)	15 (60)	1
Number of participants who worried about the impact of CMV on their kidney transplant (%)	14 (56)	12 (48)	0.79
Number of participants aware of CMV at the time of interview (%)	22 (88)	8 (32)	<0.001
How worried were participants about CMV on a 10-point Likert scale; median (Q1-Q3)	2.5 (1-4.375)	0 (0-1)	<0.001
Number of participants who thought they would recognise the symptoms of CMV (%)	6 (24)	1 (4)	0.1
Number of patients who thought more should be done to educate transplant recipients about CMV(%)	19 (76)	22 (88)	0.7
Number of patients who were aware of the difference between prophylactic and pre-emptive anti-CMV management (%)	6(24)	-	-
Number of patients who thought that more should be done to explain the difference between prophylactic and pre-emptive approaches.	18 (72)	-	-

Table 1. Summary of responses by the CMV cohort to key interview questions on the impact of CMV and the efficacy of its treatment.

Conclusions

- Low awareness:** There is a significant gap in CMV awareness among kidney transplant recipients.
- Desire for further education:** Kidney transplant recipients expressed a strong desire for improved CMV education.
- Clinical implications:** Enhancing patient education on CMV could improve post-transplant outcomes by empowering recipients to recognize symptoms and seek timely care.