

## Letter

# Latent viral infections in critically ill patients

Matt P Wise<sup>1</sup>, Paul J Frost<sup>1</sup>, Chris D Hingston<sup>1</sup> and Andrew J Godkin<sup>2</sup>

<sup>1</sup>Adult Critical Care, University Hospital of Wales, Cardiff CF14 4XW, UK

<sup>2</sup>School of Medicine, Cardiff University, Cardiff CF14 4XN, UK

Corresponding author: Matt P Wise, [mattwise@doctors.org.uk](mailto:mattwise@doctors.org.uk)

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See related research by Osawa and Singh, <http://ccforum.com/content/13/3/R68>

A key message of Osawa and Singh's review of cytomegalovirus infection in critically ill patients is that the infection occurred in 25% of patients and was associated with worse outcome [1]. Emphasis was placed on the lack of proof of causality between infection and outcome, and reactivation may reflect illness severity.

The herpesvirus family all cause latent infections in humans, and similar rates of infection, morbidity and mortality have also been reported in comparable patients with herpes simplex virus [2,3]. Nevertheless, although infection rates with latent herpesviruses appear high, the majority of seropositive patients do not suffer reactivation. Acquisition of herpesviruses in infancy results in trivial clinical illness, suggesting we have co-evolved effectively with these pathogens. Indeed a recent report highlighted how herpesviruses offer protection from bacterial infections [4]. Latent, but not acute, infection conferred a 100-fold to 1,000-fold reduction in bacterial burden due to IFN $\gamma$ -dependent macrophage activation. Latency with all herpesviruses in humans is probably associated with frequent subclinical reactivation, which may lead to reticuloendothelial cell priming [5].

We suggest that the sequelae of latent infection may not be universally adverse in all patients, some of whom may be protected from developing septic shock and never enter the intensive care unit. Osawa and Singh suggested a study to determine the role of antiviral agents; until the mechanisms and significance of reactivation in different patient groups are elucidated, however, such studies will prove difficult to interpret. A pilot study of acyclovir in the prophylaxis of herpesvirus infections in critical care is already underway in the United Kingdom (ISRCTN29934637).

## Competing interests

The authors declare that they have no competing interests.

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IFN = interferon.