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Septic shock without infection

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Comments

This is an interesting retrospective analysis which highlights the continuing poor outcome in septic shock and identifies a subgroup of patients, without clinical or microbiological evidence of infection, who do significantly worse. These patients will always be a difficult group to treat but this study reinforces the importance of continued clinical and radiological searches for occult infection that is amenable to surgical drainage, and vigorous and repeated microbiological testing and sampling.

Introduction

Treatment of septic shock relies on supportive cardiovascular measures, identification of infection, and appropriate surgery or antimicrobial therapy to remove the organism. Unfortunately, an infecting organism isn't identified in up to 50% of patients who clearly have septic shock.

Aims

To determine whether outcome in septic shock differs between those patients with and without clinically or microbiologically identified infection.

Methods

Over a 3 year period (1993-1996) the data on patients treated for septic shock were retrospectively analysed. Septic shock was defined, and was not reliant on the identification of an infecting organism. Treatment of all patients followed the authors' standard intensive care unit (ICU) protocol. Conditions

with known systemic inflammatory response syndrome (SIRS) responses, such as pancreatitis and trauma, were excluded. All possible specimens were taken for the identification of infecting organisms.

Results

In total, 227 patients received treatment for septic shock, of whom 30 patients (13%) had no clinical or microbiological evidence of infection. Mortality was significantly higher in those patients with septic shock but no evidence of infection: 86% Vs 66% $p < 0.05$.

Discussion

The North American consensus conference defined septic shock as SIRS with confirmed infection, hypotension and evidence of hypoperfusion. Unfortunately a number of patients don't fulfill all these criteria but clearly should be included in this category of patient. There are a number of reasons why an organism may not have been isolated, including antibiotic use prior to ICU admission, incomplete microbiological testing for unusual organisms, and incomplete microbiological sampling. The likely explanation for the increased mortality seen in those patients without evidence of infection is that treatment was ineffective because incorrect antimicrobials were used or pus wasn't surgically drained.

References

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