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H-CSF in the ICU

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Comments

This studies reinforces numerous previous studies showing that neutropenic patients admitted to the ICU have an appalling prognosis. The debate over whether ICU admission is justified for these patients will continue. Despite criticisms that can be leveled at the design of this study, the introduction of H-CSF on the ICU as adjuvant therapy for neutropenic patients during an acute critical illness is not warranted. However no conclusions can be drawn over whether therapy with H-CSF should be discontinued after admission to the ICU for patients already started on H-CSF following myeloablative therapy.

Introduction

Mortality remains at 80-90% for neutropenic, oncological patients admitted to the ICU with respiratory, renal, or hepatic failure or cardiovascular instability, and it is argued that the ICU may be inappropriate for these patients. Hematopoietic colony-stimulating factors (H-CSF), which include granulocyte (G) and granulocyte-macrophage (GM)-CSF, have been shown to hasten neutrophil recovery after myelotoxic or myeloablative therapy, but only a small study has looked at their use in acute sepsis.

Aims

To investigate whether H-CSF accelerates neutrophil recovery and improves outcome in neutropenic patients admitted to the ICU.

Methods

Retrospective examination of case records of all neutropenic patients ($n= 30$) admitted to the authors' ICU (Saudi Arabia) between 1990 and 1994, and who received H-CSF. Comparisons were made with the previous 30 neutropenic patients (controls) admitted to the ICU prior to the use of H-CSF.

Results

Underlying diseases were leukaemia, lymphoma or aplastic anaemia and the majority were admitted for respiratory and/or haemodynamic instability. There were no difference between the two groups with respect to neutrophil recovery, length of ICU stay and survival. Microbiological data revealed few differences apart from 1 of 30 patients in the H-CSF and 6 of 30 in the control group who had systemic candidiasis. Overall only 10 of 60 (17%) survived their ICU stay and a further four patients died within 3 months of leaving the ICU.

Discussion

This study confirms the gloomy prognosis for neutropenic patients admitted to the ICU for organ support. H-CSF appears to offer no benefit in the treatment of acute sepsis in these patients and the authors comment that the lower incidence of *Candida* infection in the H-CSF group warrants further investigation.

Additional information

An editorial accompanies this paper.

References

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