Rev Clin Esp. 2014;214(7):403–409

Revista Clínica Española

www.elsevier.es/rce

SPECIAL ARTICLE

Patients with cancer in the intensive monitoring unit. New perspectives☆

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Received 28 October 2013; accepted 10 March 2014
Available online 9 May 2014

KEYWORDS
Cancer;
Mechanical ventilation;
Intensive care units test;
Organ failure;
Neutropenia

Abstract In recent years, there has been a significant improvement in the survival of patients with cancer in intensive care units (ICUs). Advances in medical and surgical treatments and better selection of patients have helped improve the life expectancy of such type of patients. An appropriate and early resuscitation in the ICU, without initial limitations on the life support techniques, has been shown to also decrease the mortality of patients with cancer. At present, we should not deny admission to the ICU based only on the underlying neoplastic disease. However, the mortality rate for patients with cancer in the ICU, especially those with hematologic disease, remains high. In some cases, an ICU admission test (ICU test) is required for at least 3 days to identify patients who can benefit from intensive treatment. We would like to propose a decision algorithm for ICU admission that will help in making decisions in an often complex situation.

PALABRAS CLAVE
Cáncer;
Ventilación mecánica;
Test de Unidad de Cuidados Intensivos;
Fallo orgánico;
Neutropenia

El paciente con cáncer en la unidad de vigilancia intensiva. Nuevas perspectivas

Resumen Durante los últimos años, se ha evidenciado una mejoría significativa en la supervivencia de los pacientes con cáncer en las unidades de cuidados intensivos (UCI). Tanto el avance en el tratamiento médico y quirúrgico, como una mejor selección de pacientes, han influido en la mejoría de las expectativas vitales de estos enfermos. En la UCI una resucitación adecuada y precoz, sin limitaciones iniciales a técnicas de soporte vital, ha demostrado disminuir también la mortalidad en los pacientes con cáncer. Actualmente, no debemos denegar el ingreso en UCI solo por la enfermedad neoplásica de base. Aun así, la mortalidad del paciente

☆ Please cite this article as: Prieto del Portillo I, Polo Zarzuela M, Pujol Varela I. El paciente con cáncer en la unidad de vigilancia intensiva.Rev Clin Esp. 2014;214:403–409.

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2254-8874/

con cáncer en la UCI, especialmente el hematológico, sigue siendo alta y en algunos casos es necesario realizar una prueba de ingreso en UCI (test de UCI) de, al menos, 3 días para diferenciar a los pacientes que se estén beneficiando de un tratamiento intensivo. Proponemos un algoritmo de decisión al ingreso en la UCI que nos ayude en una situación, a veces, compleja.

Background

For years, the admission of patients with cancer to intensive care units (ICUs) has been very restricted, mainly because hospitalization in the ICU is associated with high mortality rates. This is most evident in patients who require invasive mechanical ventilation (IMV).

In recent years, the survival of patients with oncohematologic diseases (POHD) in the ICU has improved dramatically.[1] Several factors have contributed to these results, including better selection of patients and overall progress in the treatment of solid and hematological neoplasms. From the intensive care point of view, the proper and early treatment of patients with sepsis (code sepsis), replacement therapies for organ failures, progress in prevention measures for nosocomial infection in critical patients, better management of sedoanalgesia and developments in ventilatory support (such as noninvasive mechanical ventilation and the optimization of ''weaning'') have increased life expectancy in this group of patients.

Currently, 15% of patients admitted to European ICUs are POHD, especially patients with solid neoplasms and who undergo some type of surgery.[2]

In the following review, we will attempt to answer the following questions that arise when POHD require critical care, and to provide a current overview of critical care for these patients in an attempt to improve its focus:

1. Should we limit admission of POHD to the ICU?
2. What does mechanical ventilation provide us?
3. What prognostic markers are of use?
4. Does ICU mortality depend on the prognosis of the neoplastic disease? What is the quality of life of POHD after hospital discharge?
5. What is an ICU test? Under what circumstances should the test be applied?

Should we limit the admission of POHD to the ICU?

The prioritization model is the most frequently used system to decide whether a patient should be admitted to the ICU, defining an order starting from patients who will most benefit from admission (priority 1) to those who will not benefit in any case (priority 4) (Table 1).[3] For many years, POHD have been considered as belonging to priority 3 and 4 groups within this assessment system. As we will discuss in the following article, a large portion of patients with neoplasms should be considered priority 1.

Table 1 Levels of prioritization.

Priority 1: Patients who are gravely ill, unstable, who require monitoring and treatment that cannot be provided outside of the ICU. There are no initial limits on the duration or type of therapy they require. This category can include patients with septic shock with no prior disease.
Priority 2: Patients who require surveillance and monitoring measures specific to the ICU and who might require immediate intervention. This category includes, for example, patients with respiratory failure who might require mechanical ventilation.
Priority 3: Patients who, due to their underlying disease or acute disease, have little chance of recovery. Although treatment is initiated in the ICU, measures can be established to restrict the therapeutic effort over the course of their evolution. Patients with chronic exacerbated respiratory diseases and limited quality of life are an example of this category.
Priority 4: Patients for whom ICU admission is considered inappropriate, either due to end-stage or irreversible diseases (too ill to benefit from the ICU) or for not requiring any of the measures intrinsic to the ICU (too healthy to benefit from the ICU).

The objective of admitting patients to an ICU is to improve their life expectancy, while not taking measures that entail a significant reduction in their quality of life after their hospital discharge. This last constraint has been and is still an argument used in many centers for not admitting POHD to the ICU, despite the weak scientific evidence supporting that argument in most cases. It is therefore important that we consider the various aspects that could help us in making decisions that are always difficult.

The main reason POHD might require intensive care, excluding elective surgery, is infectious complications. More than half of those admitted are hospitalized for this reason. In general, these infections occur in the context of immunosuppression due to various causes. The understanding of these infections and the appropriate antimicrobial approach are essential factors that determine patient outcomes. Acute respiratory failure and severe sepsis are present in more than 80% of patients who require hospitalization for medical reasons.

The need for IMV significantly worsens the prognosis of critically ill patients, especially in the case of POHD.[4–8] In any case, we should point out several issues. First, hospital mortality associated with IMV for POHD is between 60% and 80%.[9,10] Although high, this does not change the fact that 1