



# Revista Española de Anestesiología y Reanimación

[www.elsevier.es/redar](http://www.elsevier.es/redar)



## ORIGINAL ARTICLE

### Analysis of factors conditioning admission at the critical care unit of surgical patients. Prospective study of 764 patients operated for 1 year at a university and reference hospital<sup>☆,☆☆</sup>

J. Gil Bona<sup>a,\*</sup>, A. Pascual Bellosta<sup>a</sup>, J. Ojeda Cabrera<sup>b</sup>, S. Ortega Lucea<sup>a</sup>, L. Muñoz Rodríguez<sup>a</sup>, J. Martínez Ubieta<sup>a</sup>, G. Pérez-Navarro<sup>a</sup>

<sup>a</sup> Servicio de Anestesiología, Hospital Universitario Miguel Servet, Zaragoza, Spain

<sup>b</sup> Departamento de Estadística, Facultad de Ciencias, Universidad de Zaragoza, Zaragoza, Spain

Received 16 January 2014; accepted 21 May 2014

Available online 21 January 2015

#### KEYWORDS

Morbimortality;  
Surgical patients;  
Risk factors;  
Critical care

#### Abstract

**Objective:** Assess what factors determine the income of surgical patients in critical care unit after surgery.

**Materials and methods:** It included a survey of the 10% of all patients operated by the services of General Surgery, Thoracic Surgery, Maxillofacial Surgery, Vascular Surgery, Urology and Otolaryngology during 2012. We performed a prospective, observational study. Pre-, intra-, and post-operative variables were analysed. Comparisons were made between patients operated under elective and emergency surgery, and between patients admitted in critical care and admitted directly in the ward, using  $\chi^2$  of Pearson correlation with a confidence interval of 95%.

**Results:** Seven hundred and sixty-four patients were included into the study, 304 were admitted in critical care after surgery and 460 were admitted in the ward. The medical history showed a statistically significant association with intensive care unit admission, well as the fact of being labelled with a high risk for the risk scales. Complexity and duration of the surgery showed a statistically significant association with intensive care unit admission, as well as the fact of present intra-operative complications. Emergency surgery was not significantly associated with intensive care unit admission of surgical patients, although these patients had significantly higher numbers of intra- and post-operative complications, and more exitus than those undergoing elective surgery.

<sup>☆</sup> Please cite this article as: Gil Bona J, Pascual Bellosta A, Ojeda Cabrera J, Ortega Lucea S, Muñoz Rodríguez L, Martínez Ubieta J, et al. Análisis de los factores que condicionan el ingreso de los pacientes quirúrgicos en una unidad de críticos. Un estudio prospectivo sobre 764 pacientes intervenidos durante 1 año en un hospital universitario y de referencia. Rev Esp Anesthesiol Reanim. 2015;62:72–80.

<sup>☆☆</sup> This article is part of the Anaesthesiology and Resuscitation Continuing Medical Education Program. An evaluation of the questions on this article can be made through the Internet by accessing the Education Section of the following web page: [www.elsevier.es/redar](http://www.elsevier.es/redar)

\* Corresponding author.

E-mail address: [gilbona@hotmail.com](mailto:gilbona@hotmail.com) (J. Gil Bona).

*Conclusions:* A greater incidence of intensive care unit admission of patients undergoing emergency surgery should significantly reduce morbimortality rate. The existence of specific protocols for intensive care unit admission for urgent surgery, and greater availability of beds could be useful in this regard.

© 2014 Sociedad Española de Anestesiología, Reanimación y Terapéutica del Dolor. Published by Elsevier España, S.L.U. All rights reserved.

## PALABRAS CLAVE

Morbimortalidad;  
Pacientes quirúrgicos;  
Factores de riesgo;  
Cuidados críticos

## Análisis de los factores que condicionan el ingreso de los pacientes quirúrgicos en una unidad de críticos. Un estudio prospectivo sobre 764 pacientes intervenidos durante 1 año en un hospital universitario y de referencia

### Resumen

*Objetivo:* Valorar qué factores determinan el ingreso de los pacientes quirúrgicos en una unidad de críticos tras la cirugía.

*Material y métodos:* Se incluyó un censo del 10% de todos los pacientes intervenidos por los servicios de Cirugía General, Cirugía Torácica, Cirugía Maxilofacial, Cirugía Vasculor, Urología y Otorrinolaringología durante el año 2012. Se realizó un estudio prospectivo, observacional. Se analizaron variables preoperatorias, intraoperatorias y posoperatorias. Se compararon aquellos pacientes ingresados en críticos con los ingresados en planta, y los intervenidos de urgencia con los programados, mediante la  $\chi^2$  de Pearson con un intervalo de confianza del 95%.

*Resultados:* Se introdujeron en el estudio 764 pacientes, siendo ingresados 304 en críticos tras la cirugía y 460 en planta. Los antecedentes patológicos mostraron asociación estadísticamente significativa con el ingreso de los pacientes en críticos, así como el ser marcado con alto riesgo por las escalas de predicción de riesgo quirúrgico. La complejidad y duración de la cirugía mostraron una asociación estadísticamente significativa con el ingreso en críticos, así como el presentar complicaciones intraoperatorias. La cirugía de urgencia no se asoció significativamente con el ingreso en críticos de los pacientes quirúrgicos, aunque estos pacientes sí presentaron significativamente mayor número de complicaciones intraoperatorias y posoperatorias, y más éxitos que los sometidos a cirugía programada.

*Conclusiones:* Un mayor índice de ingreso en críticos de los pacientes intervenidos de urgencia se presume disminuiría la morbimortalidad quirúrgica. Protocolos específicos de ingreso para cirugía de urgencia y una mayor disponibilidad de camas podrían ser útiles en este sentido.

© 2014 Sociedad Española de Anestesiología, Reanimación y Terapéutica del Dolor. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

## Introduction

The development of different surgical techniques in recent years has increased the number and complexity of surgical procedures.<sup>1</sup> As a result, a growing number of surgical patients are admitted to intensive care units, and are fast becoming the predominant patient population in this setting.<sup>2</sup>

Beds in intensive care units are limited and expensive.<sup>2,3</sup> Only patients who can truly benefit from such specialised care are admitted to these units, and over-use of these services would unnecessarily increase care costs, while an overly restrictive policy could lead to higher mortality rates.<sup>3,4</sup> For this reason, the status and possible evolution of patients must be thoroughly studied before deciding whether to admit them to intensive care or transfer them directly to a ward.<sup>2-4</sup>

The evolution of surgical patients depends on concomitant diseases,<sup>5-10</sup> and the complexity, length,<sup>11,12</sup> and

urgency<sup>13-15</sup> of the surgical procedure. The aim of this study is to evaluate the extent to which these factors determine the transfer of patients to an intensive care unit following surgery performed in a secondary university hospital.

## Materials and methods

Once our proposal had been approved by the hospital's ethics committee, we carried out a prospective, descriptive, observational study. Data on each patient's concomitant diseases were obtained from their pre-anaesthesia evaluation. Surgical records were traced and studied to collect data on the type of procedure, intraoperative and postoperative events, the unit to which the patient was transferred after surgery, and their evolution. A total of 764 patients were included in the study, corresponding to 10% of the total number of patients receiving surgery in the following specialities: general and gastrointestinal, vascular,

Download English Version:

<https://daneshyari.com/en/article/2769901>

Download Persian Version:

<https://daneshyari.com/article/2769901>

[Daneshyari.com](https://daneshyari.com)