CIRUGÍA ESPAÑOLA

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Original article

Economic Impact of Clinical Variability in Preoperative Testing for Major Outpatient Surgery☆,☆☆

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ARTICLE INFO

Article history:
Received 17 July 2015
Accepted 29 December 2015
Available online 21 May 2016

Keywords:
Health care costs
Ambulatory surgical procedures
Preoperative care

ABSTRACT

Background: With the purpose of decreasing the existing variability in the criteria of preoperative evaluation and facilitating the clinical decision-making process, our hospital has a protocol of preoperative tests to use with ASA I and ASA II patients. The aim of the study was to calculate the economic impact caused by clinicians' non-adherence to the protocol for the anaesthesiological evaluation of ASA I and ASA II patients.

Methods: A retrospective study of costs with a random sample of 353 patients that were seen in the consultation for Anesthesiology over a period of one year. Aspects related to the costs, patient's profiles and specialties were analysed, according to the degree of fulfilment of the protocol.

Results: The lack of adherence to the protocol was 70%. 130 chest X-rays and 218 ECG were performed without indication. This generated an excess costs of 34 € per patient. Taking into account the expenses of both tests and the attended population undergoing ambulatory surgery during the one-year period, an excess spending for the hospital of between 69,164 € and 83,312 € was estimated.

Conclusions: Clinical variability should be reduced and the creation of synergies between the different departments should be enhanced in order to adjust the request for unnecessary complementary tests to decrease health care and to improve the quality of patient care.

☆ Please cite this article as: Gil-Borrelli CC, Agustí S, Pla R, Díaz-Redondo A, Zaballos M. Economic impact of clinical variability in preoperative testing for major outpatient surgery. Cir Esp. 2016;94:280–286.

☆☆ Part of this study was used in 2 oral communications presented at the Spanish Society for Quality Healthcare Conference held in October 2014, in Madrid, under the title: *Quality and efficiency of anaesthesia evaluations for major ambulatory surgery in ASA I and II patients*.

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2173-5077/

Impacto económico de la variabilidad clínica en la petición de pruebas preoperatorias en cirugía mayor ambulatoria

Palabras clave:
Costos de la atención de salud
Procedimientos quirúrgicos ambulatorios
Cuidados preoperatorios

RESUMEN

Introducción: Con el propósito de disminuir la variabilidad en la petición de pruebas preoperatorias y facilitar la toma de decisiones, nuestro centro ha establecido un protocolo de pruebas preoperatorias para pacientes ASA I y ASA II tratados mediante cirugía mayor ambulatoria (CMA). El objetivo del estudio fue calcular el impacto económico relacionado con la falta de adherencia de los profesionales al protocolo establecido.

Métodos: Estudio de costes retrospectivo con un muestreo aleatorizado simple de 353 pacientes atendidos en la consulta de anestesia durante un año. Se analizaron aspectos relacionados con los costes, así como el perfil de pacientes y especialidades según el grado de cumplimiento del protocolo establecido.

Resultados: La falta de adherencia al protocolo fue del 70%. Se realizaron 138 radiografías de tórax y 218 electrocardiogramas no indicados, lo que supuso un exceso de coste medio de 34 € por paciente. Teniendo en cuenta el coste de ambas pruebas y la población atendida en CMA durante el año evaluado, la falta de adherencia al protocolo supuso un exceso de coste anual para el centro entre 69.337 € y 84.727 €.

Conclusiones: Es preciso reducir la variabilidad clínica y favorecer la creación de sinergias entre los diferentes servicios para adecuar la petición de pruebas complementarias, disminuir los costos de la atención y mejorar la calidad asistencial.

Introduction

The objective of preoperative evaluations is to provide information about the physical and mental health status of patients, to assess their risks for anaesthesia/surgery, and to outline a plan for anaesthesia/analgesia as well as perioperative care. As the physical status of patients correlates with different surgical risks in the American Society of Anesthesiologists (ASA) classification,[1] it is necessary to properly select and evaluate patients to undergo surgical intervention. Hence, anaesthesia evaluations include a series of diagnostic tests in order to detect previously undiagnosed diseases, thereby guaranteeing that the patient has met certain safety criteria before surgery. These tests, however, are often routinely requested, with no specific clinical indication, based on the erroneous concept that they are a substitution for proper patient medical history and physical examination.[2] These tests are an unnecessary expense, have questionable diagnostic value, are generally useless, and their impact on the final results of the operation is very limited. Meanwhile, patients are being subjected to studies that are not free of risks themselves. This reduces the quality of the healthcare received while considerably increasing costs per patient, in addition to other indirect costs such as travel expenses, lost productivity at work, etc. Although many preoperative tests are low cost, if we consider the elevated number of patients treated who are classified as ASA I and II, the final result is a needless expenditure of millions of euros for the public healthcare system.[3] With the current search for ways to guarantee the sustainability of the Spanish national healthcare system, increased efficacy in the administration of these resources is a highly relevant goal.

The protocol for ordering preoperative studies at our centre is based on the recommendations of the Spanish Society for Anaesthesia, Reanimation and Pain Therapy and the Spanish Association of Major Ambulatory Surgery. The protocol establishes the criteria by which diagnostic tests should be requested for patients who are scheduled for low-risk surgery, according to ASA grade. At our hospital, this information had been distributed to all the surgical departments that conduct major ambulatory surgery (MAS).

Although many studies have discussed the existence of great variability in performing the same procedure within the healthcare system of our country, to our knowledge there have been no studies estimating the cost attributable to the variability in preoperative evaluations for MAS.

The main objective of this study was to calculate the economic impact associated with clinical variability and lack of adherence to the protocol established in our hospital for the anaesthesia evaluation of ASA I and II patients. As a secondary objective, the authors proposed to report and analyse patient profiles and surgical specialties according to the degree of protocol compliance.

Methods

We conducted a retrospective cost minimisation study using a simple randomised sample of cases that had been treated in