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ORIGINAL ARTICLE

Anti-platelet drugs in patients with femoral neck fractures undergoing cemented hip hemiarthroplasty surgery. A study of complications and mortality☆

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Abstract
Objective: To assess complications and factors predicting one-year mortality in patients on anti-platelet agents presenting with femoral neck fractures undergoing hip hemiarthroplasty surgery.
Material and methods: A review was made on 50 patients on preoperative anti-platelet agents and 83 patients without preoperative anti-platelet agents. Patients in both groups were treated with cemented hip hemiarthroplasty. A statistical comparison was performed using epidemiological data, comorbidities, mental state, complications and mortality. There was no lost to follow-up.
Results: The one-year mortality was 20.3%. In patients without preoperative anti-platelet agents it was 14.4% and in patients with preoperative anti-platelet agents was 30%. Age, ASA grade, number of comorbidities and anti-platelet agent therapy were predictors of one-year mortality.

The one-year mortality of patients on clopidogrel was 46.1%, versus 24.3% in patients on acetylsalicylic acid.
Conclusion: Patients with preoperative anti-platelet therapy were older and had greater number of comorbidities, ASA grade, delayed surgery, and a longer length of stay than patients without anti-platelet therapy. The one-year mortality was higher in patients with preoperative anti-platelet therapy.

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PALABRAS CLAVE
Fractura de cadera;
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Antiagregación en pacientes con fractura subcapital desplazada de fémur tratados con prótesis parcial cementada. Estudio de complicaciones y mortalidad

Resumen
Objetivo: Evaluar las complicaciones y la mortalidad en pacientes antiagregados con fractura cervical desplazada de cadera tratada con prótesis parcial.
Material y método: Estudio de 133 pacientes en el período 2008 a 2010 que se distribuyeron en 2 grupos, con tratamiento antiagregante en el momento del ingreso (50 pacientes) y sin tratamiento antiagregante (83 pacientes). Todos tratados mediante sustitución parcial de cadera con implante de prótesis parcial modular cementada. Se valoraron los datos epidemiológicos, comorbilidades, estado mental, complicaciones y mortalidad. No hubo pérdidas de seguimiento.
Resultados: La mortalidad anual de la serie completa fue del 20,3%; en pacientes no antiagregados, del 14,4%, y en pacientes antiagregados, del 30%. Los predictores de mortalidad a los 12 meses fueron la edad, el grado ASA, el número de comorbilidades asociadas y la antiagregación.
Los pacientes antiagregados con clopidogrel tuvieron una mortalidad del 46,1%, frente al 24,3% de los pacientes antiagregados con ácido acetilsalicílico.
Conclusiones: Los pacientes antiagregados tenían mayor edad, número de comorbilidades, grado ASA, demora quirúrgica y estancia hospitalaria que los no antiagregados. A los 12 meses de la cirugía la mortalidad acumulada ha sido mayor en pacientes antiagregados que en los no antiagregados.

Introduction

The association of hip fractures with anti-platelet (or anti-aggregant) drugs is increasingly common among patients suffering hip fractures, particularly elderly patients, and this conditions their perioperative management due to the theoretical risks associated to surgical bleeding.

Anti-aggregant drugs are indicated as prophylaxis or treatment of arterial thrombotic processes, with a variable response due to patient idiosyncrasies, non-compliance with therapeutic patterns and drug interactions, as these subjects are often polymedicated.[1]

There is a general consensus that surgical treatment is the best option for hip fractures, as it reduces morbidity and mortality.[2] Delaying surgery in patients with anti-aggregants aims to prevent the onset of anesthetic and hemorrhagic complications, as well as the need for transfusions. On the other hand, delaying the intervention could increase morbidity and mortality and delay functional recovery.

In 2007, the Spanish Society of Traumatology and Orthopedic Surgery (SECOT) published the Guide for Elderly Hip Fracture Patients, which indicated that the optimal moment for surgery depended on the general condition of each patient, as well as their comorbidities and concomitant treatments. In addition, the delay was also influenced by intrinsic factors of the healthcare system or working routine of each hospital. The association of both groups of factors led to surgical delays of over 24 h becoming common at our hospitals. Regarding the management of acetylsalicylic acid (ASA) among patients with hip fractures, the Guide stated that although the decision about when to carry out the surgery in this kind of patients should contemplate the risks and benefits in each specific case, delaying the operation was not justified and patients should be intervened as soon as possible.[3] Nevertheless, it was not until 2011 that the Spanish Society of Anesthesiology, Reanimation and Pain Therapy (SEDAR) published the Clinical Practice Guideline for the Perioperative Management of Anti-platelet Drugs in Non-Cardiac Surgery, which indicated that the preoperative decision to interrupt or continue treatment with anti-platelet agents should always be based on a detailed and individualized assessment of each patient which evaluated the probable increase in thrombotic risk in case of interruption versus the hypothetical increase of the hemorrhagic risk derived from its maintenance. The Guide recommended suspending ASA between 2 and 5 days and clopidogrel between 3 and 7 days for the perioperative management of non-cardiac surgery.[4]

The difference in criteria between anesthesiologists and traumatologists at our center led us to consider the hypothesis that there was a greater incidence of complications and mortality 1 year after the surgery comparing between patients with and without anti-platelet therapy who suffered displaced subcapital fractures of the femur treated through cemented hip hemiarthroplasty.

Material and method

Between January 2008 and December 2010, our database of hip fractures registered a total of 339 proximal femoral fractures, of which 152 (44.8%) were subcapital femoral fractures and, out of these, 140 (41.2%) were displaced. Of the 140 patients with displaced subcapital femoral