

ORIGINAL ARTICLE

Clinical assessment of patients with isolated hip fractures associated with an upper limb fracture[☆]



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Received 18 July 2017; accepted 28 October 2017

KEYWORDS

Hip fracture;
Upper limb fracture;
Barthel Index;
Orthogeriatric Unit

Abstract

Introduction: Some patients with a hip fracture also present a concomitant upper limb fracture. We want to know whether these patients have a worse functional level and whether they have any differences in various clinical parameters compared with patients with an isolated hip fracture.

Material and methods: We retrospectively reviewed 1061 discharge reports from the Orthogeriatrics Unit. We collected information on several clinical parameters of the fractures. Subsequently, we performed a statistical analysis of the data by comparing the associated fracture group with the isolated fracture group.

Results: We detected 44 patients with associated upper limb fracture, 90.9% were women (40) and the average age was 84.45 years. Eighty-one point eight percent of the upper limb fractures were distal radius or proximal humerus. Pertrochanteric fractures were the most common (none of them were subtrochanteric fractures). Surgical delay was 2.60 days and the average hospital stay was 12.30 days. Sixty-four point three percent were nail surgery and 31% arthroplasty. The mean Barthel Index score was 84.88 ($P = .021$). Fifty-two point 5% of the patients in the study group were referred to a functional support unit ($P = .03$). The in-hospital mortality rate was 4.2%, with no differences between groups.

Conclusions: Patients with an associated fracture have a higher previous functional capacity and they are more independent. Nevertheless, after the fracture they need more help from the healthcare system for optimal functional recovery.

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[☆] Please cite this article as: Gómez-Álvarez J, González-Escobar S, Gil-Garay E. Evaluación clínica de pacientes con fractura de cadera aislada y asociada a fractura de miembro superior. Rev Esp Cir Ortop Traumatol. 2018;62:222–227.

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PALABRAS CLAVE

Fractura de cadera;
Fractura de miembro superior;
Índice de Barthel;
Unidad de ortogeriatría

Evaluación clínica de pacientes con fractura de cadera aislada y asociada a fractura de miembro superior

Resumen

Introducción: Hay una proporción de pacientes con fractura de cadera que tienen una fractura de miembro superior concomitante. Queremos conocer si estos pacientes muestran un peor nivel funcional y si presentan diferencias en distintos parámetros clínicos con respecto a los que tienen una fractura aislada de cadera.

Material y métodos: Se han revisado retrospectivamente 1.061 informes de alta de la Unidad de Ortojeriatría del H. U. La Paz de Madrid. Se recopiló información sobre distintos parámetros clínicos de las fracturas presentadas. Posteriormente se comparó el grupo de fractura asociada con el de fractura aislada mediante un análisis estadístico.

Resultados: Se detectaron 44 pacientes con una fractura de miembro superior asociada, el 90,9% fueron mujeres (40) y la media de edad fue de 84,45 años. El 81,8% de las fracturas de miembro superior fueron de radio distal o de húmero proximal. La demora quirúrgica fue de 2,60 días y la estancia media hospitalaria, de 12,30 días. El 64,3% fueron intervenciones con clavo-tornillo y el 31%, artroplastias. La media del índice de Barthel fue de 84,88 ($p=0,021$). El 52,5% de los pacientes del grupo a estudio fueron derivados a un centro de apoyo funcional ($p=0,03$). La mortalidad global intrahospitalaria fue del 4,2%, sin diferencias entre los grupos. **Conclusiones:** Los pacientes que presentan una fractura asociada tienen mayor capacidad funcional previa y son más independientes. Tras la fractura necesitan una mayor ayuda por parte del sistema sanitario para su óptima recuperación funcional.

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Introduction

Trauma due to a fall is one of the most frequent reasons why patients visit emergency departments. One of the results of such trauma is that patients suffer a hip fracture. Fractures of this type, which are strongly associated with osteoporosis, have a high degree of morbimortality and lead to major costs for the Spanish National Health System over a year.¹

It is estimated that in Spain there is an average incidence of from 500 to 600 cases of hip fracture per 100,000 elderly people/year. This incidence is also estimated to differ between the sexes, as in the case of women it amounts to 700 cases per 100,000 elderly women/year.^{2,3}

Fracture of the proximal femur is therefore one of the main health problems affecting elderly patients.⁴ Considering the demographic evolution towards an increasing elderly population due to the increase in life expectancy, the incidence of proximal femur fractures has increased considerably in European communities,⁵ and this trend will continue in the coming years.^{6,7} The mortality rate associated with fractures of this type is high during hospitalisation (5%), as well as at 3 months (15%) or at one year after the fracture (20–30%).⁸

After trauma some patients do not only have isolated fracture of the proximal femur, as they may also have a concomitant fracture of an upper limb.

There is discussion in the traumatological community about the physical condition of these patients. Some authors such as Di Monaco et al.⁹ state that patients who suffer a hip fracture associated with the fracture of an upper limb are in worse physical condition than those patients who only have

hip fracture, given that as they have two or more concomitant fractures their level of bone mineralisation as well as their basal state and mobility are worse.

On the contrary, other authors such as Lin et al.¹⁰ and Shabat et al.¹¹ state that the existence of an upper limb fracture associated with a hip fracture is a sign that the patient is in a better or at least equal functional state, given that they are still able to defend themselves against trauma using a reflex mechanism that attempts to slow a fall using an upper limb.

Another reason for undertaking this study was that patients with this type of associated fracture are more restricted in support and walking due to the difficulty or impossibility of using aids such as crutches, walking sticks or Zimmer frames.

Are the patients who fracture an upper limb at the same time as they suffer a hip fracture more fragile? Are these patients in worse physical and medical condition?

Objectives

- To evaluate whether patients with a concomitant hip and upper limb fracture have better or worse functional capacity.
- To discover whether there are statistically significant differences in a range of medical, surgical and treatment parameters between the groups studied.
- To evaluate whether the clinical management of patients with an associated fracture differs from that of the group with a single fracture.

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