

# Interdisciplinary prevention of hip fracture

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**S**pain has one of the highest hospital costs relating to hip fracture, at 9,936 euros for an admission related to this pathology<sup>1</sup>. To these economic-health costs we must add those arising in the patient's environment and, above all, the non-quantitative costs arising from

the changes in lifestyle and the loss of productivity which fragility fractures produce, both for the patient, as well as for their families, and for society as a whole. These are difficult to quantify, pending the results of the ICUROS and PROA<sup>2</sup> studies, which have estimating these costs as their objectives.

If we take into account the high number of hip fractures treated annually, 720 cases annually for every 100,000 people over 60 years of age, it is not difficult to understand the serious public health problem this represents. However, the true problem is not the financial costs, but in the personal cost which results, and which is translated into raised levels of morbimortality.

Hip fracture, the outcome of loss of femoral resistance, and in many cases, of a fall, is the most serious example of the complications of osteoporosis. Its treatment should be based on resolving the functional problem, improving the nutritional and metabolic state of the injured person, on avoiding new falls and trying to recuperate and reinforce the bone structure.

If these actions are not carried out diligently the clinical and life prognosis will become more serious. Approximately a third of patients with hip fracture die as a consequence of it, the mortality index in autonomous patients without acute disease at admission, and having an intervention for hip fracture during the first or following day after hospital admission, being significantly lower than in those patients in whom the intervention is made later<sup>3</sup>.

This mortality is increased in those patients with a deteriorated nutritional state<sup>4,5</sup>, who have levels of

albumen lower than <3.5g/dl and in patients with dementia, among other factors<sup>6</sup>. In spite of the fact that improved nutrition in patients is vital, and that it has been proved that the administration of protein supplements are effective in the recuperation of the patient and the prevention of complications<sup>7</sup>, the prescription of recommended diets and of fall prevention is practically nonexistent in clinical histories<sup>8</sup>. But it is also necessary to curb bone loss and, as far as possible, recuperate the bone structure, since a second fracture may occur in up to 14% of cases in a period of less than 5 years, most of these being in the first 18 months. But it is not possible to treat a disease if it is not present. Firstly, there must be an awareness of underlying osteoporosis following a low energy hip fracture. However, the ABOPAP study indicated that 67.7% of doctors surveyed said that osteoporosis was not included in the preventative activities of their place of work<sup>9</sup>.

Secondly, the establishment of drug treatment. The drugs most commonly used in recent years in treatment and secondary prevention have been the bisphosphonates. Their efficacy is such that they have been associated with a reduction in the frequency of hip fractures detected since the middle of the last decade<sup>10</sup>, and in the appearance of secondary hip fractures<sup>11</sup>. However, the Record of Osteoporotic Fractures in Spain (Acta de Fracturas Osteoporóticas en España (AFOE)) study carried out by the Osteoporosis Study and Research Group (Grupo de Estudio e Investigación de la Osteoporosis (GEIOS)) of the Spanish society of Orthopaedic Surgery and Traumatology (Sociedad Española de Cirugía Ortopédica y Traumatología (SECOT)), proved that the diagnosis of osteoporosis prior to fracture was only token, and that only 18.4% of the patients had received any treatment for osteoporosis before the fracture. But, what was worse was that only 25.6% of patients received treatment on discharge. A subsequent initiative, the GIOS project (Gestión Integral de la Osteoporosis Integrated Management of

Osteoporosis), showed how it was possible to improve the prescription rate to 61.8% of cases<sup>12</sup>, this successful outcome the result of the collaboration between traumatologists and primary care doctors, as the authors of this work recognise. For all these reasons we must highlight the fact that nowadays, treatment of hip fracture cannot and should not be carried out only by the traumatologist. The combined action of professionals from different specialisms (traumatologists, geriatricians, rehabilitators, anaesthetists, nurses, social workers, etc) enables a resolution of the hip fracture which is more rapid, complete and satisfactory; collaboration based on scientific evidence, such as that proposed and developed by GEIOS along with other medico-surgical societies, and which nowadays are a reality in a great many centres in our country<sup>13</sup>. The work published in this number, and developed by Dr Herrera Pérez et al.<sup>14</sup>, proves that the establishment of clinical pathways agreed by the different specialisms involved in the treatment of hip fractures, and the implementation of verification measures (checklists) to ensure secondary prevention of new fractures on discharge, contribute to adherence to treatment. This is interesting work which will need to be evaluated over the next few years to determine the impact it has had on the reduction in new fractures.

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