



Original Article

Primary and secondary osteoporotic fractures prophylaxis: evaluation of a prospective cohort[☆]



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ABSTRACT

Objective: To measure the prevalence of primary drug prevention of fractures due to osteoporosis in patients admitted to a tertiary teaching hospital, in a medium-sized city, admitted with osteoporotic fractures. Moreover, to identify the incidence of prescribing secondary prophylaxis after the first fracture event. At the same time, the prevalence of risk factors for such fractures as described in the literature was measured.

Methods: This longitudinal prospective study was based on a cohort of patients admitted in a tertiary teaching hospital from October 2015 to January 2016. Patients with low energy or fragility fractures were included in the study regardless of gender or race, over the age of 50 years. All patients who did not have these characteristics were excluded. The follow-up lasted four months. Serial questionnaires were applied at admission and in the follow-up consultations at four to eight weeks and at 16 weeks.

Results: Only one patient reported receiving treatment with specific drugs for the disease before hospital admission, resulting in a prevalence of primary chemoprophylaxis of only 2.27%. No patient was prescribed medication for the treatment of osteoporosis after the fracture. The prevalence of risk factors was similar to those found in the literature review.

Conclusion: In the present study, the frequency of primary and secondary osteoporosis chemoprophylaxis in patients who were admitted with fragility fractures was low, as well as the early indication of drug treatment after the first fracture. The prevalence of fragility fracture risk factors is similar to those reported in the literature.

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Profilaxia primária e secundária de fraturas osteoporóticas: avaliação de uma coorte prospectiva

R E S U M O

Palavras-chave:

Osteoporose/epidemiologia
Osteoporose/terapia
Fraturas ósseas/epidemiologia
Fraturas ósseas/prevenção & controle
Prevenção primária
Prevenção secundária
Fatores de risco

Objetivo: Medir a prevalência da profilaxia medicamentosa primária de fraturas por osteoporose em pacientes internados em um hospital terciário de ensino, em uma cidade de médio porte, admitidos com fraturas osteoporóticas. Além disso, identificar a incidência de prescrição de profilaxia medicamentosa secundária após o evento da primeira fratura. Paralelamente, medimos a prevalência de fatores de risco para fratura por osteoporose descritos na literatura.

Método: Estudo longitudinal de uma coorte prospectiva de pacientes admitidos em hospital terciário de ensino de outubro de 2015 a janeiro 2016. Foram incluídos pacientes com fraturas de baixa energia ou por fragilidade, independentemente do gênero ou etnia, acima de 50 anos. Todos os pacientes que não apresentavam essas características foram excluídos. O seguimento foi de quatro meses. Foram aplicados questionários seriados na admissão, no retorno com quatro a oito semanas e com 16 semanas.

Resultado: Somente um paciente referiu ter recebido tratamento com drogas específicas para a doença antes da internação hospitalar, o que revela uma prevalência de quimioprofilaxia primária de apenas 2,27%. Nenhum paciente recebeu prescrição para tratamento da osteoporose após a fratura. A prevalência dos fatores de risco de fratura se assemelha àquela encontrada na literatura.

Conclusão: A frequência de quimioprofilaxia primária e secundária da osteoporose em pacientes admitidos com fraturas por fragilidade é baixa em nosso meio, assim como a indicação precoce de tratamento medicamentoso após a primeira fratura. A prevalência dos fatores de risco de fratura por fragilidade é semelhante àquela citada na literatura.

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Introduction

Osteoporosis (OP) is a chronic, progressive, osteometabolic disease characterized by a decrease in bone mineral density (BMD), and due to the deterioration of bone microarchitecture, leading to mechanical fragility and predisposition to spontaneous and traumatic fractures.^{1,2} The estimated world predominance is 7% in males and 17% in females.³ In Brazil, it accounts for about 10 million cases per annum.³⁻⁵ The risk of fractures due to osteoporosis is higher in females, and increases with age; they are associated with high rates of morbidity and mortality.⁶

The most common sites of involvement are the distal end of the radius, vertebrae, proximal femur, proximal humerus, proximal tibia, ankle, and pelvis.⁷ Diagnosis and therapeutic planning are performed and based on BMD, which is the best predictor of fractures.⁸

Most patients presenting with osteoporotic fractures have never previously undergone BMD measuring, a surprising fact if we take the epidemiological data of OP into account, and because it is an easily preventable complication.⁹ The early diagnosis and consequent treatment of the disease reduce the rate of morbidity and mortality.¹⁰

Although there is no consensus as to who is responsible for initiating secondary prophylaxis after the first fracture, any physician who evaluates this patient should consider the

multiple treatment options.^{10,11} The timing for hospitalization due to a fracture is a great opportunity for patients and their families to be aware of the disease and of the importance of the therapeutic intervention, since the presence of a fracture in a fragile bone is a sufficient factor for the diagnosis of OP, regardless of other tests.¹⁰ Secondary pharmacological prophylaxis (prevention of new fractures) can be performed with the use of different drugs, with some being available in the Brazilian Public Health System (SUS).¹¹

The objectives of this study were to measure the prevalence of primary drug prophylaxis of osteoporosis in patients admitted to a tertiary teaching hospital in a medium-sized city, admitted with osteoporotic fractures. In addition, to identify the incidence of prescription for secondary prophylaxis of fractures after the event of the first fracture. At the same time, we measured in our sample the prevalence of known fracture risk factors in the literature.

Methodology

This is a prospective longitudinal study based on a cohort of consecutive patients admitted to a tertiary teaching hospital from October 2015 to January 2016. The present study was approved by the Ethics and Research Committee (CAAE 46809015.1.0000.5103). We included all patients with fractures, regardless of gender or ethnicity, who were older than 50 years and had a diagnosis of low-energy or fragility

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