Atypical femoral fractures and bisphosphonates

To the Editor

We read with interest the study by Alwahhabi and Alsuwain on the long-term effects of the long-term use of bisphosphonates (BPs) in patients with osteoporosis. Although the study is retrospective and observational, it revisits atypical femoral fractures (AFFs), one of 2 rare but serious adverse effects of long-term use of BPs. The authors do not provide any demographic data of the studied patients; a table that indicates the age, gender, duration of therapy with BPs, other therapies, co-morbidities, type, time of fracture, post fracture therapy, and outcome. Several of the cases in the study do not satisfy the revised case definition of AFFs by the ASBMR Task Force 2013. The definition states that the fracture must be located along the femoral diaphysis from just the distal to the lesser trochanter to just proximal to the supracondylar flare that has a transverse orientation and non- or minimally comminuted morphologic features, show focal lateral cortical thickening (beaking or flaring), occurs with minimal trauma and may be bilateral. Exclusions include fractures of the femoral neck, intertrochanteric fractures with spiral subtrochanteric extension, peri-prosthetic, and pathological fractures. In Figure 1, cases B and F are peri-prosthetic fractures, cases H and K are comminuted fractures and case O is a spiral fracture. Therefore, by definition they are not AFFs.

The case depicted in Figure 4 is a 70-year-old woman with rheumatoid arthritis and a diaphyseal fracture has already sustained a proximal femoral fracture 4 years previously. This is again periprosthetic and more likely to be pathological due to osteoporosis rather than the result of overtreatment with zoledronic acid in spite of the presence of cortical thickening.

It is important that we inform patients on long term BPs to report any persistent groin or thigh pain as 70% of patients with AFFs have a history of prodromal pain.

Using BPs for up to 5 years in women with osteoporosis is associated with a highly favorable benefit-to-risk ratio, with less than one event caused per 100 fractures prevented.

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Reply from the Author

Regarding the demographic data. We rapped the data in the results. We provided age range (46-89), gender distribution (one male, 33 females). The authors do not provide any demographic data of the studied patients; a table that indicates the age, gender, duration of therapy with BPs, other therapies, co-morbidities, type, time of fracture, post fracture therapy, and outcome. Several of the cases in the study do not satisfy the revised case definition of AFFs by the ASBMR Task Force 2013. The definition states that the fracture must be located along the femoral diaphysis from just the distal to the lesser trochanter to just proximal to the supracondylar flare that has a transverse orientation and non- or minimally comminuted morphologic features, show focal lateral cortical thickening (beaking or flaring), occurs with minimal trauma and may be bilateral. Exclusions include fractures of the femoral neck, intertrochanteric fractures with spiral subtrochanteric extension, peri-prosthetic, and pathological fractures. In Figure 1, cases B and F are peri-prosthetic fractures, cases H and K are comminuted fractures and case O is a spiral fracture. Therefore, by definition they are not AFFs.

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References