

Intravenous Ibandronate in the Treatment of Osteoporosis

A Viewpoint by Juliet Compston

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In recent years there have been significant advances in the prevention of fractures due to osteoporosis, and a number of interventions are now available. Of these, the bisphosphonates alendronate and risedronate are generally regarded as first-line options, with proven efficacy against both vertebral and nonvertebral fractures, including hip fracture. More recently, another bisphosphonate, ibandronate, has become available at an oral dosage of 150mg once monthly or, most recently, 3mg intravenously once every 3 months.

Whilst bisphosphonates are generally well tolerated, the complicated dose administration regimen required for oral formulations may be inconvenient and is sometimes difficult for patients to follow. Furthermore, as with any treatment for chronic disease, compliance and persistence with osteoporosis therapy are poor. The intravenous route avoids strin-

gent dose administration requirements, and the longer dose interval may also improve compliance and persistence. A particular advantage with intravenous ibandronate is that it can be given as a simple intravenous injection over 15–30 seconds, without the need for infusion over a longer period, as is required for other intravenous bisphosphonates.

Antifracture efficacy has not been directly demonstrated for intravenous ibandronate but is inferred on the basis of noninferiority bone mineral density studies where comparison of the approved dosage (3mg intravenously once every 3 months) was made with an oral dosage of 2.5mg once daily. It should be noted that reduction in vertebral fractures, but not nonvertebral fractures, was established with the daily oral formulation and this is reflected in the approved indication for intravenous ibandronate, namely reduction of vertebral fracture risk in postmenopausal women. Alendronate and risedronate therefore remain the bisphosphonates of choice in the majority of postmenopausal women with osteoporosis, but in those in whom oral bisphosphonates are contraindicated or not tolerated, the new intravenous formulation of ibandronate provides an alternative option. ▲