

Oral Abstract

OR3

Prevention and treatment of corticosteroid osteoporosis with zoledronic acid

Sambrook PN¹, Nash P², Ferrari V³ and Jones G⁴

1. Institute of Bone and Joint Research, Royal North Shore Hospital, NSW

2. Rheumatology Research Unit, Sunshine Coast, QLD

3. Novartis Pharmaceuticals Australia Pty Ltd, North Ryde, NSW

4. Menzies Centre for Population Health Research, University of Tasmania

Introduction: Corticosteroid osteoporosis remains a significant clinical problem. The aim of this study was to compare two different bisphosphonate regimens.

Methods: Randomised double blind trial over 12 months comparing single dose zoledronic acid (ZA) 5 mg IV versus risedronate 5 mg daily in male and female subjects aged 18-85 years either on (n= 545) or commencing (n= 288) corticosteroids (at least prednisone 7.5mg/day). Bone density (BMD) at the hip and spine and bone turnover were the main outcomes.

Results: Both groups were osteopenic at baseline with a median prednisone intake of 10mg/day. BMD increased in both groups compared to baseline. However, ZA was superior to risedronate for all bone density outcomes (difference 1.2-2.0% per annum, all P<0.01). Similar results were present for bone resorption with evidence for a rapid onset of action of ZA (9-11 days) and superiority over risedronate. Bone formation decreased in both groups with a slightly greater decline in the ZA group. Insufficient fractures were observed for any meaningful comparison of fracture incidence. Side effects were as expected although less subjects (around 10-15%) experienced pyrexia as compared to postmenopausal osteoporosis. Around 80% of subjects preferred once yearly treatment.

Conclusions: Based on intermediate variables, ZA is more effective than risedronate for both the prevention and treatment of corticosteroid bone disease. It is also well tolerated and preferred by the majority of patients.