
Article:
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(-0.44SD, 95%CI -0.18 to -0.69) and HSM2 (-0.71SD, 95%CI -1.18 to -0.24) were lower and HSM6 (0.51SD, 95%CI 0.02 to 1.01) and HSM8 (1.06SD, 95%CI 0.51 to 1.60) were higher in OH males, whilst HSM5 was lower in OH in both sexes (-0.35SD, 95%CI -0.67 to -0.03). On modelling the combined effect of these associations, OH appeared to be associated with a wider femoral neck and head, and larger lesser/greater trochanters particularly in males (Figure 1). Only weak associations were observed between gestation length/breech and HSMs.

These results suggest that prenatal skeletal loading, in particular oligohydramnios, may influence adolescent joint shape with associations generally stronger in males.

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Comparison of treatment responder rates for three oral bisphosphonates: The TRIO study

Margaret A. Paggiosi[a], Nicola Peel[b], Eugene McCloskey[a], Jennifer S. Walsh[a], Richard Eastell[a]
[a]*Oncology and Metabolism, The University of Sheffield, Sheffield, United Kingdom*
[b]*Metabolic Bone Centre, Northern General Hospital, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom*

Bone mineral density (BMD) is used to assess bisphosphonate treatment efficacy however it is unclear whether the response rate is similar for all oral bisphosphonates.

The TRIO study is a 2-year, randomized, open-label, parallel, trial of three oral bisphosphonates. We recruited 172 postmenopausal women (53-84 years) with a BMD T-score, of ≤-2.5 at the spine and/or total hip, or ≤ -1.0 plus a previous fragility fracture. Participants were randomized to receive either ibandronate (A), alendronate (B) or risedronate (C). at the licenced dose together with calcium (120 mg/day) and vitamin D (800 IU/day). Lumbar spine, total hip and femoral neck BMD were measured at baseline, weeks 12 (in duplicate), 48 and 96.

We calculated individual BMD changes between baseline and weeks 12, 48 and 96. Duplicate week 12 results were used to calculate the least significant change (LSC) for lumbar spine (4.4%), total hip (4.2%) and femoral neck BMD (8.0%). Women were classified as treatment responders if their individual BMD increase was greater than the site-specific LSC. Differences in the number of responders by weeks 12, 48 and 96 were examined using chi-squared tests.

The LSC for femoral neck BMD was larger than that for lumbar spine and total hip BMD. Lumbar spine BMD identified more treatment responders than total hip BMD and femoral neck BMD. The number of treatment responders was dependent on the bisphosphonate type. By week 96, more women had responded to alendronate than ibandronate and risedronate.

Anatomical site	Responders by week 12 (n/total n (%))	Responders by week 48 (n/total n (%))	Responders by week 96 (n/total n) (%))
Lumbar spine	A=10/49 (20.4), B=11/55 (20.0), C=7/48 (14.6), All=28/152 (18.4)	A=24/45 (53.3), B= 25/50 (50.0), C=12/46 (26.1), All=61/141 (43.3)	A=20/29 (69.0)*, B=29/34 (85.3)*, C=13/30 (43.3)*, All=62/93 (66.7)
Total hip	A=6/48 (12.5), B=10/55 (18.2), C=3/48 (6.3), All=19/151 (12.5)	A=10/44 (22.7), B=12/50 (24.0), C=4/46 (8.7), All=26/140 (18.4)	A=9/28 (32.1)**, B=18/34 (52.9)**, C=6/30 (20.0)**, All=33/92 (35.9)
Femoral neck	A=6/48 (12.5)*, B=1/55 (1.8)*, C=1/48 (2.1)*, All=8/151 (5.3)	A=5/44 (11.4), B=2/50 (4.0), C=3/46 (6.5), All=10/140 (7.1)	A=0/28 (0), B=3/34 (8.8), C=2/30 (6.7), All=5/92 (5.4)

Responders by treatment duration, bisphosphonate type and anatomical site. Difference between bisphosphonates (A, B, and C) *p=0.04 and **p=0.03.

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Fracture rates in patients discontinuing alendronate treatment in real-life: A pharmaco-epidemiological study

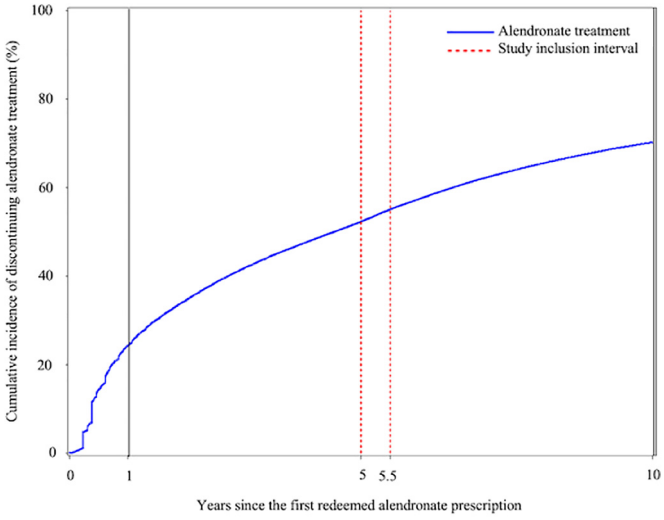
Anne Sophie Sølling[a], Diana Hedevang Christensen[b], Bianka Darvalics[b], Torben Harsløf[a], Reimar Wernich Thomsen[b], Bente Langdahl[a]
[a]*Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark*
[b]*Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, Denmark*

Purpose: Based on the FLEX trial it has become clinical practice to discontinue alendronate (ALN) after 5 years of treatment, however, information on the fracture risk in these patients in a real-life setting is sparse. We aimed to examine ALN discontinuation patterns, to compare the fracture rates in patients discontinuing ALN after 5 to 5.5 years to patients continuing ALN for more than 5.5 years and to determine predictors of fractures after ALN discontinuation.

Methods: A nationwide population-based cohort study using Danish health registry data. Our source population was patients living in Denmark who had redeemed at least two ALN prescriptions between January 1st 1995 and September 1st 2018 (n=186,219). We used similar exclusion and inclusion criteria as in the FLEX trial.

Results: We found that 25% of ALN initiators used ALN for less than one year and 43% continued treatment for 5 years. Comparing patients who discontinued ALN after 5 to 5.5 years with continuers, we observed no increase in the risk of vertebral fractures (incidence rate ratios (IRR) 0.59, 95% CI 0.33-1.06), hip fractures (IRR 1.04, 95% CI 0.75-1.45) or major osteoporotic fractures (IRR 1.05, 95% CI 0.88-1.25). High age (>80 vs. 50-60 years, IRR 2.59, 95% CI 1.01-6.49) was a predictor for fractures following ALN discontinuation.

Conclusion: Less than 50% continued ALN treatment for 5 years. We did not find an increased risk of fractures in patients discontinuing ALN after 5 to 5.5 years compared to patients continuing ALN for more than 5.5 years.



The cumulative incidence of discontinuing alendronate starting from the first redeemed alendronate prescription treating death as competing risk
n=176671

Figure 1.

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