

Bisphosphonate treatment for osteoporosis

Bisphosphonates have been widely used in the treatment of osteoporosis with robust data demonstrating efficacy in fracture risk reduction with three to five years of treatment or in some cases up to ten years. This briefing advises on optimising bisphosphonate treatment.

Recommendations

- All practice clinical staff should accurately record READ/SNOMED CT codes for fracture risk factors, osteoporosis diagnosis and whether treatment is offered or not indicated in patient's notes.
- Provide patients with an information leaflet to help them understand osteoporosis and their bisphosphonate treatment (attachments 1 and 2).
- Set up treatment reviews on the GP practice clinical system at appropriate intervals to check for adherence and adverse effects, starting and reviewing a treatment break, or discontinuing treatment through shared decision making.
- Review whether the bisphosphonate can be stopped, either completely or for a treatment break, at the following intervals:
 - » Three years for patients with multimorbidity (two or more long-term conditions).
 - » Three years for zoledronic acid.
 - » Five years for alendronic acid, risedronate sodium, and ibandronic acid.
 - » Ten year review for all patients for the continued need for a bisphosphonate as there is no evidence to support continued prescribing beyond ten years.
- When a drug treatment break is started, assess the need for recommencing the bisphosphonate at the end of the following intervals, or sooner if there is a new fracture:
 - » 18 months for risedronate sodium
 - » Two years for alendronic acid or ibandronic acid
 - » Three years for zoledronic acid.
- Use the least costly oral bisphosphonate (NICE TA464), currently generic alendronic acid 70mg tablets once weekly. If alendronic acid cannot be used, use generic risedronate sodium tablets 35mg once weekly. If risedronate sodium cannot be used, use ibandronic acid 150mg tablets once a month. If an oral bisphosphonate is not suitable, use generic zoledronic acid 5mg intravenous infusion once a year.

Background

NICE CG146 is first used to assess the patient's risk of fragility fracture and decide whether a FRAX®/QFracture® 10-year risk assessment should be done.¹ Once the FRAX®/QFracture® 10-year risk percentage is known, this is compared to the NICE QS149/NOGG 2017 treatment thresholds.^{2,3} Oral bisphosphonate treatment is regarded as cost-effective for anyone meeting these treatment thresholds in line with NICE TA464.⁴

The lack of evidence for long term use beyond ten years and concerns over rare (≥ 1 in 10,000 and < 1 in 1,000 cases) but serious adverse effects of atypical femoral fractures and osteonecrosis of the jaw and very rare (< 1 in 10,000 cases) osteonecrosis of the external auditory canal have raised questions on how to manage long-term bisphosphonates.⁵⁻⁸ The 2017 NOGG guideline provides some advice on managing long-term bisphosphonate treatment to optimise patient outcomes.³ This should be used alongside NICE Guideline (NG) 56 which offers alternative advice for patients with multimorbidity taking alendronic acid, risedronate sodium, and ibandronic acid.⁹

Costs and savings

Annually £8.4 million is spent on bisphosphonates for osteoporosis in England and Wales (ePACT2 Sep-Nov 18). Although most bisphosphonates are prescribed as generics, savings can still be made by switching away from more expensive products, such as branded versions, effervescent tablets and oral solutions. £2.3 million was spent on branded bisphosphonates, effervescent tablets and oral solutions in England and Wales (ePACT2 Sep - Nov 18). Switching 80% of prescriptions from these products to generic alendronic acid 70mg tablets once weekly **would provide cost savings of an estimated £1.6 million annually in England and Wales. This equates to £2,492 per 100,000 patients.** Further savings and benefits to patients could be made by appropriately introducing bisphosphonate treatment breaks and appropriately stopping treatment. Savings made can be used to fund new patients identified for treatment or referred from the local Fracture Liaison Service.

References

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| Additional resources available: |  | Bulletin | https://www.prescqipp.info/our-resources/bulletins/bulletin-231-bisphosphonate-treatment-for-osteoporosis/ |
| |  | Implementation resources | |
| |  | Data pack | https://pdata.uk/#/views/B231_Bisphosphonatetreatmentforosteoporosis/FrontPage?:iid=1 |

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