NHS
Pan Mersey
Area Prescribing Committee

ORAL BISPHOSPHONATES for treating osteoporosis

The Pan Mersey Area Prescribing Committee recommends the prescribing of ORAL BISPHOSPHONATES (alendronic acid, ibandronic acid and risedronate sodium) for treating osteoporosis in accordance with NICE TA464.

GREEN

NICE TA464 (last updated 08 July 2019) partially updates NICE TA160 and NICE TA161. It recommends the oral bisphosphonates; alendronic acid, ibandronic acid and risedronate sodium as options for treating osteoporosis in adults:

- who are eligible for risk assessment as defined in NICE Clinical Guideline CG146 on osteoporosis (recommendations 1.1 and 1.2) and the NICE Quality Standard QS149 on osteoporosis, **and**
- who have been assessed as being at higher risk of osteoporotic fragility fracture using the methods recommended in NICE CG146 (recommendations 1.3 to 1.12) and NICE QS149 on osteoporosis, **and**
- when bisphosphonate treatment is appropriate, taking into account their risk of fracture, their risk of adverse effects from bisphosphonates, and their clinical circumstances and preferences.

The choice of treatment should be made on an individual basis after discussion between the responsible clinician and the patient, or their carers, about the advantages and disadvantages of the treatments available. If generic products are available, start treatment with the least expensive formulation, taking into account administration costs, the dose needed, and the cost per dose.[1]

Where patients are unable to take oral bisphosphonates, refer to NICE TA464 and Pan Mersey APC Formulary.

NICE CG146 (last updated 07 February 2017) recommends to consider assessment of fracture risk:

- In all women aged 65 years and over and all men aged 75 years and over
- In women aged under 65 years and men aged under 75 years in the presence of risk factors, for example:
  - previous fragility fracture
  - current use or frequent recent use of oral or systemic glucocorticoids
  - history of falls
  - family history of hip fracture
  - other causes of secondary osteoporosis
  - low body mass index (BMI) (less than 18.5 kg/m^2)
  - smoking
  - alcohol intake of more than 14 units per week for men and women[2]

Refer to NICE CG146 for methods of fracture risk assessment. Do not routinely assess fracture risk in people aged under 50 years unless they have major risk factors (for example, current or frequent recent use of oral or systemic glucocorticoids, untreated premature menopause or previous fragility fracture), because they are unlikely to be at high risk.[2]

Note: Patients who are not eligible for treatment under this statement may be considered on an individual basis where their GP or consultant believes exceptional circumstances exist that warrant deviation from the rule of this policy. In this situation, follow locally defined processes.

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NICE QS149 (published 28 April 2017) recommends that:

- Adults who have had a fragility fracture or use systemic glucocorticoids or have a history of falls have an assessment of their fracture risk.
- Adults at high risk of fragility fracture are offered drug treatment to reduce fracture risk.
- Adults prescribed drug treatment to reduce fracture risk are asked about adverse effects and adherence to treatment at each medication review.
- Adults having long-term bisphosphonate therapy have a review of the need for continuing treatment.[3]

Duration of treatment

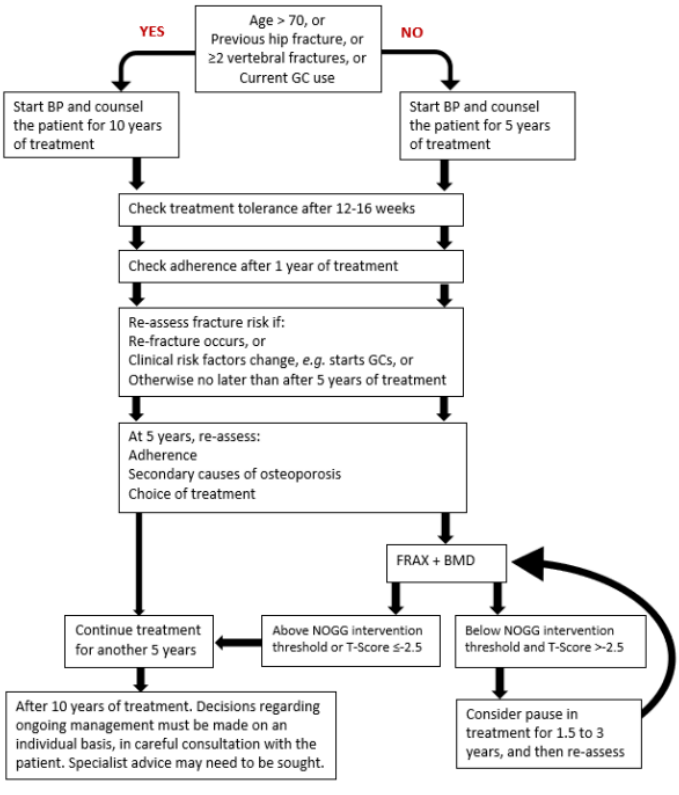
The National Osteoporosis Guideline Group (NOGG) 2021 Clinical guideline for the prevention and treatment of osteoporosis (last updated September 2021) recommends that for postmenopausal women and men aged 50 years or older, oral bisphosphonates should be prescribed for at least 5 years and then fracture risk should be reassessed. Longer durations of treatment, for at least 10 years, are recommended in the following patients:

- Age ≥70 years at the time that the bisphosphonate is started
- Patients who have a previous history of a hip or vertebral fracture(s)
- Patients treated with oral glucocorticoids ≥7.5 mg/day of prednisolone/day or equivalent
- Patients who experience one or more fragility fractures during the first 5 years of treatment (if treatment is not changed).[4]

Refer to Figure 1 below for NOGG Clinical Flowchart for long term treatment and monitoring of oral bisphosphonates.

In lower risk patients, a temporary treatment pause of 1.5 to 3 years can be considered after 5 years' oral bisphosphonate treatment. If a new fracture occurs after bisphosphonate treatment is discontinued, the patient should be reassessed using FRAX and treatment restarted. If bisphosphonate treatment is discontinued and no new fracture occurs, the patient should be reassessed using FRAX after 1.5 years for risedronate and ibandronate, or after 2 years for alendronate to inform whether treatment should be restarted. [4]

Figure 1. Oral bisphosphonates: NOGG Clinical Flowchart for long term treatment and monitoring:[4]



GC: Glucocorticoids (oral ≥7.5 mg prednisolone/day or equivalent). BP: bisphosphonate

Safety

- Please refer to the Summary of Product Characteristics (SPC) for each individual drug for full safety information.
- The MHRA has published guidance on the use and safety of bisphosphonates for healthcare professionals (18 December 2014).[5]
- Atypical femoral fractures have been associated with bisphosphonate therapy. Patients should be advised to report any thigh, hip, or groin pain during bisphosphonate treatment. Any patient who presents with such symptoms should be evaluated for an incomplete femur fracture.[6]
- There is a risk of developing osteonecrosis of the jaw with the use of bisphosphonates. All patients with cancer should have a dental check-up before bisphosphonate treatment. All other patients should have a dental examination only if they have poor dental status. During bisphosphonate treatment, patients should maintain good oral hygiene, receive routine dental check-ups, and report any oral symptoms such as dental mobility, pain, or swelling.[7]
- The Scottish Dental Clinical Effectiveness Programme has published guidance for Oral Health Management of Patients at Risk of Medication-related Osteonecrosis of the Jaw (MRONJ) (March 2017)[8] which provides practical advice for assessment and management of patients at risk of developing MRONJ, including patients who are taking bisphosphonates.
- Oral bisphosphonates are associated with serious oesophageal adverse reactions including oesophagitis, oesophageal ulcers, oesophageal strictures and oesophageal erosions. Patients should be advised to stop taking bisphosphonates and to seek medical attention if they develop any symptoms of oesophageal irritation such as difficulty or pain upon swallowing, chest pain, or new or worsening heartburn.[5]
- Osteonecrosis of the external auditory canal has been reported very rarely with bisphosphonates, mainly in association with long-term therapy (2 years or longer). Patients should be advised to report any ear pain, discharge from the ear, or an ear infection during bisphosphonate treatment.[9]

References

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4. National Osteoporosis Guideline Group. NOGG 2021: Clinical guideline for the prevention and treatment of osteoporosis, September 2021. Accessed 07 June 2022.
5. Medicines and Healthcare products Regulatory Agency . Guidance; Bisphosphonates: use and safety, 18 December 2014. Accessed 08 March 2022.
6. Medicines and Healthcare products Regulatory Agency. Drug Safety Update; Bisphosphonates: atypical femoral fractures, 11 December 2014. Accessed 08 March 2022.
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8. Scottish Dental Clinical Effectiveness Programme. Dental Clinical Guidance; Oral Health Management of Patients at Risk of Medication-related Osteonecrosis of the Jaw, March 2017. Accessed 14 July 2022.
9. Medicines and Healthcare products Regulatory Agency. Drug Safety Update; Bisphosphonates: very rare reports of osteonecrosis of the external auditory canal, 14 December 2015. Accessed 08 March 2022.