

Bisphosphonate alternative regimens for the prevention of osteoporotic fragility fractures: BLAST-OFF, a mixed-methods study

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Plain language summary

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Background

Bisphosphonates are drug treatments commonly used to treat osteoporosis. Alendronate is the most used and is taken by mouth, weekly at a specific time of the week, which can be challenging. Less than one in four people continue this treatment beyond 2 years. Alternative bisphosphonates are available, which vary in frequency and how they are administered. The most acceptable and best value-for-money regimen is unclear.

Aim

Our aim was to determine how effective alternative bisphosphonates are compared to alendronate at preventing fractures and whether reduction in fracture risk was achieved at a reasonable financial cost, but acceptable to patients.

Design and methods

The study was conducted in two stages, stages 1A and 1B in parallel, followed by stage 2:

- Stage 1A: a review of the published evidence on patients' and doctors' views, experiences and preferences regarding different bisphosphonate treatment regimens, followed by interviews with patients and healthcare professionals.
- Stage 1B: an update of an existing study on how effective bisphosphonates are in preventing fragility fractures caused by osteoporosis and whether they are good value for money.
- Stage 2: identification of questions that need to be answered about the effectiveness and acceptability of bisphosphonate treatments.

Results

Taking bisphosphonate medication often involves quite a lot of effort by patients, particularly when taking alendronate tablets. A yearly infusion of zoledronate treatment was more acceptable, easier to engage with and the most effective treatment compared to alendronate. However, the cost of administering zoledronate in hospital made alendronate better value for money.

Conclusions

Bisphosphonates are effective in reducing the risk of fracture, but 'continuing with treatment', particularly alendronate tablets, remains a challenge. A yearly infusion of zoledronate offers an acceptable and effective treatment, but further research is needed to support patients and healthcare professionals in making decisions about the various treatments, benefits and cost savings of administering zoledronate outside of hospital and in the community.

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