PATIENT INFORMATION SHEET - ZOLEDRONATE (ACLASTA)

Zoledronate (also known as zoledronic acid or Aclasta) is one of the most potent medicines in the bisphosphonate class currently available for the treatment of osteoporosis. Bisphosphonates work by preventing resorption of bone by inhibiting the function of bone-dissolving cells called osteoclasts. Bisphosphonates are commonly used in the treatment of osteoporosis and Paget's disease, and are also used for preventing some forms of cancer from spreading to bone. Whereas some bisphosphonates are given as tablets by mouth (e.g. alendronate and risedronate), zoledronate is given by an intravenous infusion (into a vein in the arm, via a "drip") over about 15 minutes and can be repeated every 18-36 months for treatment of osteoporosis. Zoledronate increases bone density in patients with osteoporosis, to about the same extent or slightly better than other medicines such as alendronate (Fosamax), and is effective at reducing fracture rates. Clinical fractures are reduced by 33% over 6 years of treatment. It is licensed in New Zealand for treatment of osteoporosis if fracture risk is sufficiently increased (Ministry of Health Special Authority required). Other than flu-like symptoms after the first infusion, side-effects from zoledronate treatment are uncommon, and are in general no different from placebo-treated patients in randomised trials.

Side-Effects of Zoledronate

1. About 30% of individuals experience a **flu-like illness** after their first treatment, which usually lasts 24-72 hours, but which can occasionally go on for longer, sometimes with associated muscle or joint aching. This usually responds well to regular paracetamol or an anti-inflammatory such as Nurofen or diclofenac. The chance of this side-effect occurring after second or third zoledronate infusions is much lower (<5%).
2. Individuals with important pre-existing kidney damage can sometimes experience **deterioration in their kidney function** after the administration of zoledronate. It is normal practice not to use zoledronate in people whose kidneys are not functioning well.
3. In patients with severe **vitamin D deficiency**, treatment with zoledronate can lead to reduced blood calcium levels. Individuals at risk of severe vitamin D deficiency

are frail elderly people who seldom go outdoors, and those with dark skin, who are not taking vitamin D supplements. Administration of 1 or 2 oral doses of calciferol (vitamin D) 1.25 mg before iv zoledronate, is advised for such patients.

4. In <1% of people, the first dose of zoledronate causes **eye inflammation**, which responds to appropriate treatment.
5. Osteonecrosis of the jaw (ulceration in tooth sockets or the gums) occurs in a small number of cancer patients receiving high-dose very frequent treatment but only occurs at extremely low frequency (1/50,000) in people treated with the lower doses used for osteoporosis.
6. Fractures of the thigh have been reported rarely with long-term treatment using other drugs in this class but have not yet been associated with use of zoledronate.

Who Should Not Receive Zoledronate

1. Individuals with reduced kidney function (i.e. eGFR <35 mL/min)
2. Individuals with untreated severe vitamin D deficiency

Technique of infusion

1. Precheck renal function and whether patient should have a vitamin D tablet before the infusion
2. The zoledronate comes in a 100ml vial, the nurse will infuse it intravenously over 15 minutes and flush the drip line with 10ml saline at the end (note that infusion should be slower ± diluted in a larger volume of saline for those with mild renal impairment, must not be given if eGFR less than 35mL/min

If you have any other questions about this medicine, or your bone condition, you should feel free to ask your doctors.

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Auckland Bone Density