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Waitemata District Health Board
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ZOLEDRONIC ACID - SAFE PRESCRIBING - BONE UP

- CHECK RENAL FUNCTION
- ENSURE THE PATIENT IS ADEQUATELY HYDRATED
- CHECK CALCIUM AND VITAMIN D STATUS
- ASK THE PATIENT TO ARRANGE A DENTAL CHECK-UP
- GIVE OVER AT LEAST 15 MINUTES, NO MORE THAN ONCE A YEAR
- INFORM THE PATIENT ABOUT POST-DOSE SYMPTOMS

Zoledronic acid infusion is available on Special Authority (SA) for Paget's disease, osteoporosis (including prevention of glucocorticoid-induced osteoporosis), and for the prevention of additional fractures after low-trauma hip fractures.

Zoledronic acid is best for patients who have poor tolerance or compliance with oral bisphosphonates.

Note: There are 2 forms of zoledronic acid, Aclasta® (5mg) for osteoporosis, and Zometa® (4mg) for oncology patients. This bulletin will focus on the 5mg preparation for osteoporosis.

CHECK RENAL FUNCTION

Check creatinine clearance (CrCL) prior to every infusion, and if it is below 35mL/min, do not administer zoledronic acid. Regularly review other medicines that may compromise renal function such as diuretics, and NSAIDs (non-steroidal anti-inflammatory drugs).

Risk factors for renal impairment include advanced age, and concomitant medicines that can compromise renal function. A rapid infusion time (less than 15 minutes), or high dose will also increase the risk. Never exceed 5mg per year.

ENSURE THE PATIENT IS ADEQUATELY HYDRATED

Two glasses of water (500mL) should be consumed a few hours before, and after the infusion. Advise patients to maintain adequate fluid intake especially if they are elderly, or if they are also taking diuretics.

CHECK CALCIUM AND VITAMIN D STATUS

All patients with osteoporosis should have an adequate intake of calcium, and receive sufficient vitamin D. Zoledronic acid is contraindicated if patients have hypocalcaemia. Check serum calcium is within the normal range (2.0-2.6mmol/L) and treat pre-existing hypocalcaemia before initiating zoledronic acid.

If the patient is not receiving regular vitamin D, prescribe supplements prior to administration.

Cholecalciferol 2x 1.25mg tablets the week before the infusion and 1.25mg per month thereafter

ASK THE PATIENT TO ARRANGE A DENTAL CHECK-UP

Osteonecrosis of the jaw (ONJ) has mostly been associated with bisphosphonates in cancer patients, and in those with poor oral hygiene, or undergoing dental procedures such as tooth extraction.

Patients should avoid invasive dental procedures if possible. A dental examination (with preventive dentistry) is recommended prior to therapy for those with risk factors. Regularly ask about any loose teeth, pain, swelling or numbness in the jaw.

GIVE OVER AT LEAST 15 MINUTES, NO MORE THAN ONCE A YEAR

The 5mg/100mL ready-to-infuse solution is to be administered intravenously via a vented infusion line (at a constant rate) over at least 15 minutes. (Consider a longer infusion time if CrCL is approaching 35mL/min). Monitor the patient during the infusion.

For the treatment of osteoporosis, zoledronic acid should be given no more than once a year. Some patients may only require infusions every 2-3 years, depending on the results of clinical assessments such as bone turnover markers and DEXA scans. The most benefit is gained within the first 5 years, after that it may be beneficial to have a 'drug holiday' for 2-3 years to allow bone resorption to recover and reduce the risk of adverse effects.

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ZOLEDRONIC ACID

INFORM THE PATIENT ABOUT POST-DOSE SYMPTOMS

Within the first 3 days following the infusion, many patients experience flu-like symptoms, fever, myalgia, arthralgia and headache. These symptoms may be relieved with paracetamol. Although rare, bisphosphonates have been associated with inflammatory eye disorders including uveitis and scleritis. Refer to an ophthalmologist if symptoms occur.

There have been some reports of atypical femoral fractures during treatment with bisphosphonates; advise patients to report any hip, thigh, or groin pain.

Zoledronic acid has been associated with an increase in the incidence of serious atrial fibrillation (1.3%) compared to placebo (0.5%).

Note: Zoledronic acid is contraindicated during pregnancy and breastfeeding.

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CLICK HERE FOR MORE INFORMATION ON ZOLEDRONIC ACID AND A FULL REFERENCE LIST

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