

Dental Management of Patients Prescribed Bisphosphonates - Clinical Guidance

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These guidelines are based on the best evidence that is currently available. New evidence and research will be constantly influencing these guidelines and consequently these should be treated as a fluid resource. As new research is carried out these guidelines are subject to change.

What Are Bisphosphonates and How Do They Work?

Bisphosphonates are drugs that reduce bone resorption by hindering the formation, recruitment and function of osteoclasts. Bisphosphonates are used most commonly in the management of osteoporosis, but are also used in the management of many other non-malignant and malignant conditions. Bisphosphonates can have a significantly positive effect on the quality of life of patients by reducing or delaying onset of disease or treatment complications, such as bone fractures and bone pain. However, bisphosphonates accumulate at sites of high bone turnover, such as in the jaw. This may reduce bone turnover and bone blood supply and lead to death of the bone, termed osteonecrosis. The condition of particular concern for dentists is bisphosphonate-related osteonecrosis of the jaw.

What is Bisphosphonate-related Osteonecrosis of the Jaw (BRONJ)?

BRONJ is defined as exposed, necrotic bone in the maxilla or mandible that has persisted for more than eight weeks in patients taking bisphosphonates and where there has been no history of radiation therapy to the jaw. Symptoms include delayed healing following a dental extraction or other oral surgery, pain, soft tissue infection and swelling, numbness, paraesthesia or exposed bone. It should be acknowledged that BRONJ is an extremely rare condition, and it is very important that patients are not discouraged from taking bisphosphonate drugs or from undergoing dental treatment.

Note: There is no supporting evidence that BRONJ risk will be reduced if the patient temporarily, or even permanently, stops taking bisphosphonates prior to invasive dental procedures since the drugs may persist in the skeletal tissue for years. If a patient has taken bisphosphonates in the past but is no longer taking them for whatever reason (i.e. completed or discontinued the course, taking a drug holiday), allocate them to a risk group as if they are still taking them.

Reduce risk factors

Whenever possible, patients should be encouraged and counselled to stop smoking. Oral hygiene and periodontal health should be improved prior to any surgical procedures. However, the unnecessary delay or avoidance of appropriate treatment cannot be supported and each case should be considered on its own merits.

Chlorhexidine mouthwash

All patients to rinse with Chlorhexidine mouthwash twice daily during the week before extractions are done. There is no evidence that pre- and post-operative antibiotics are effective in preventing BRONJ. Immediately before the extractions, the area should be irrigated/wiped with chlorhexidine. Use atraumatic technique, and avoid raising flaps. Primary soft tissue closure should be achieved wherever possible. 24 hours post-operatively patients should rinse with Chlorhexidine twice daily for 2 months, and should be reviewed regularly to monitor healing.

Children or infants on bisphosphonates

There is currently insufficient evidence to give any meaningful guidance on treating young children on bisphosphonates. In such cases it is advisable to seek specialist advice and refer to an OMFS dept. for assessment and treatment.

All patients that are due to be prescribed bisphosphonates should have a dental examination and have completed any dental treatment 2 weeks PRIOR to starting bisphosphonates. All prescribing clinicians should ensure that patients are signposted to visit a dentist before treatment is commenced.

LOW RISK
Oral Bisphosphonates

HIGH RISK
IV Bisphosphonates, oral bisphosphonates with immunosuppressants or a previous history of BRONJ

Extraction indicated

- RCT
- Coronectomy

Can extraction be avoided?

Risk factors present?
E.g. smoking, poor OH

YES

Reduce risk factors (see note)

NO
Discuss with OMFS department

NO
PRE-OP
0.2% Chlorhexidine
M/W (see note)

NO ANTIBIOTICS

ATRAUMATIC
EXTRACTION

NO ANTIBIOTICS

POST-OP
0.2% Chlorhexidine
M/W (see note)

SURGICAL EXTRACTION
(Keep periosteal flaps minimal and minimise bone exposure AND prescribe antibiotics - Metronidazole 200mg TDS for 5 days or co-amoxiclav 250/125mg TDS for 5)

Monitor post-op healing

If site fail to heal 4-6wks post op- refer to OMFS

REFERENCES:

1. Dental extractions and bisphosphonates: the assessment, consent and management, a proposed algorithm. N. Malden et al. British Dental Journal. Vol 206 No.2, 2009
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3. Oral Health Management of Patients Prescribed Bisphosphonates- Summary Guidance. Scottish Dental Clinical Effectiveness Programme, April 2011
4. Bisphosphonates Fact File. British Dental Association, September 2008