



**BC Cancer Agency**

CARE + RESEARCH

*An agency of the Provincial Health Services Authority*

## **Bisphosphonate Medications and Osteonecrosis of the Jaw**

Bisphosphonate medications are linked to a risk of osteonecrosis of the jaw. The following care guidelines have been developed by the BC Cancer Agency Program in Oral Oncology. Regular dental care is very important for all cancer patients. As soon as possible after your cancer diagnosis, your dentist should be involved as part of your treatment team. You should also let your oncologist know your dental history and any dental procedures that are required.

### **What are bisphosphonate medications?**

Bisphosphonate medications are a class of medications which include pamidronate (Aredia™), zoledronic acid (Zometa™), alendronate (Fosamax™), risedronate (Actonel™), etidronate (Didronel™) and ibandronate (Boniva™).

Bisphosphonates are used intravenously to treat cancer which has spread to the bone, to prevent hypercalcemia of malignancy, for multiple myeloma, and for Paget's disease. They are used orally to treat osteoporosis and osteopenia.

Bisphosphonates decrease bone turnover and they may also decrease blood supply to the bone. In doing so, they can reduce bone problems associated with cancer, but they may also make it difficult for the bone to heal. The changes made to the bone with these medications are considered permanent. Be sure to tell your dentist that you have taken a bisphosphonate medication, even if you are no longer using it.

### **What is bisphosphonate osteonecrosis of the jaw?**

This is a very rare condition in which areas of the jaw bone become exposed and do not heal. It can occur due to dental disease, following oral surgery, or without any known cause.

Prevention is the best approach to reducing the risk of this complication. All cancer patients should keep up with regular dental visits, and this is especially true for those who have taken bisphosphonate medications.

Early bisphosphonate osteonecrosis may cause teeth to loosen. There may be swelling or infection in the mouth, numbness or a feeling of "heavy jaw", pain, or a sudden change in oral health. If you notice any of these signs, discuss them with your oncologist and see a dentist as soon as possible. If you wear dentures or partial dentures, stop wearing them until the dentist has told you it is alright to do so. Your oncologist can refer you to the Department of Oral Oncology at the BC Cancer Agency for an assessment from one of our specialists, who will work closely with your own dentist.

Successful treatment of osteonecrosis of the jaw is very challenging. It may be difficult to chew and eat. Infection or pain can be controlled with antibiotics, oral rinses or removable appliances which protect the exposed bone. Sometimes the exposed bone can be recontoured to remove sharp edges, but surgery is avoided because it can make the condition worse.

## **Dental Care for Patients Prescribed Bisphosphonates**

Complete prevention of bisphosphonate osteonecrosis of the jaw may not always be possible, but the already very low risk can be reduced by addressing potential problems early. If possible, oncologists may postpone bisphosphonate therapy until an optimal dental condition is achieved. The pre-bisphosphonate dental appointments aim to create dental health which can be maintained for the rest of your life. This is so that future dental surgeries or extractions are not required once the bisphosphonate treatment begins.

For patients who are already taking bisphosphonates, a complete oral, dental and radiographic examination should be done. Frequent dental cleanings and preventive care is very important. Routine dental care, including fillings, crowns and root canal therapy can be safely undertaken, and is strongly encouraged, to prevent future dental problems. Crowns should be placed on teeth with large fillings or high risk of fracture.

Extractions, periodontal surgery, orthodontics and implants should be avoided in those who have had intravenous bisphosphonate treatment. For those who have taken oral forms of the medication, these procedures are considered high risk for bisphosphonate osteonecrosis.

Dentures require frequent adjustments to prevent irritation or trauma. Denture wearers should see a dentist regularly to evaluate the oral tissues.

If extractions are required, and the bisphosphonate was prescribed for cancer, consultation should first be made with the Department of Oral Oncology at the BC Cancer Agency. Referral to an oral surgeon familiar with bisphosphonate osteonecrosis of the jaw is recommended if possible.

### **Keeping Your Oral Tissues Healthy**

Oral care is important when you have cancer and even more important when you have taken bisphosphonate medications. Meticulous oral hygiene and undertaking necessary preventive dental treatment is recommended.

Smoking, excessive alcohol, a high sugar diet, and between meal snacking should be avoided.

Brush your teeth after every meal and at bedtime. Floss at least once per day, preferably at bedtime. Use a mirror daily to check your teeth and gums and be sure to seek treatment for any change in your oral health, including bleeding gums, pain or discomfort, and infection in the teeth or mouth.

Keep your mouth moist with plain water throughout the day. Do not use juice, pop or sweet flavoring, even if dilute. A dry mouth is more prone to decay. Use medications or saliva substitutes as prescribed.

Keep your dentist up to date on your medical history and your medications. Your dentist can request a copy of the BC Cancer Agency's dental guidelines for patients taking bisphosphonates by calling 604-877-6136.