

The Potential Relationship between Bisphosphonates (Drugs for Osteoporosis) and Osteonecrosis of Bones in the Mouth

Recent reports in the scientific literature have indicated a significant risk for the development of osteonecrosis (disease/destruction of jaw bone in the mouth) in patients taking intravenous bisphosphonate medications for the treatment of various cancers, osteoporosis, and other bone metabolic diseases. The complication is seen most often when the more potent forms of the medication were used intravenously or with prolonged and/or high doses given of oral medications. The concern for many patients considering dental implants or other elective oral surgical procedures is the degree of risk/benefit in taking oral bisphosphonates, such as Fosamax[®] (alendronate), Actonel[®] (resedronate) or Boniva[®] (ibandronate).

The majority of osteonecrosis cases have occurred in patients taking the intravenous form of these drugs. However, a small percentage of osteonecrosis cases have been reported in which patients were taking the oral form of these drugs. It is known that bisphosphonate medications accumulate in the bone over time and are removed from the bone very slowly. The osteonecrosis cases that have been reported with the use of oral forms of the drug had been at higher doses for more than 2.5 years or with lower doses for more than 5 years. We must also understand that at the proper bone concentrations these medications may very well promote bone formation¹, but at higher concentrations they are known to have deleterious effects on bone cells².

We do know that the risk of osteonecrosis appears to be associated with trauma to the jaws, such as would occur with a tooth extraction or dental implant placement. But reports of spontaneous osteonecrosis of the jaws associated with these drugs are in the scientific literature as well.

It is impossible at this time to know the degree of risk for an individual patient or procedure. These drugs have been on the market for many years, and many thousands of patients taking oral bisphosphonates have had tooth extractions and implants over the years without experiencing this complication of osteonecrosis of the jaw bones. However, due to the recent reports, we feel that we must make patients aware of this fact if they are considering extractions or dental implants.

If you are taking such drugs for the treatment of osteoporosis, it is also impossible to know whether or not discontinuing the drugs prior to your procedure will decrease or eliminate the risk for the disorder. If you have been taking high doses or even low doses for a significant time period it may be prudent to discontinue the use of these drugs for several weeks or months prior to having an elective procedure done. Literature supports that the bone density benefits derived from at least one of the bisphosphonates were still present even after discontinuing therapy for 2 years.³ We recommend that you discuss this possible complication with your prescribing physician.

I have read the above information and have had an opportunity to discuss the risks and benefits of the proposed procedure with Dr. _____.

Name

Date

References:

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3. Ravn P, Bidstrup M, Wasnich RD, Davis JW. Alendronate and estrogen-progestin in the long-term prevention of bone loss: four-year results from the early postmenopausal intervention cohort study. *Ann Intern Med.* 131:935-942, 1999