

Fossy Jaw (plus photos) ~ Jaw Osteonecrosis Associated With Bisphosphonates

Source: <http://sci.tech-archive.net/Archive/sci.med.dentistry/2005-03/1291.html>

From: Joel M. Eichen (joeleichen_at_yahoo.com)

Date: 03/08/05

Date: Tue, 08 Mar 2005 06:54:33 -0500

Interesting thread, thanks. I was sent an e-mail during the last go-round with this that a related condition is known as "Fossy Jaw."

Here is some information from the 'net.

Phosphorus is a necessary constituent of the bones and nerves. But we must supply it to the body as we find it in plants. Crude rock phosphorus as it comes from the earth, is a powerful poison. Laws now prohibit its use in the manufacture of matches, because of its poisonous character. It particularly affects the jaw bone producing a condition known as "Fossy jaw." Its continued use, as a medicine, even in small doses, produces anemia and emaciation. Although so vitally essential to bone and nerve, phosphorus, when not "organized," as we find it in plants, is the most virulent poison of any of the normal elements of the human body. A man of average size contains, normally, about two pounds of phosphorus, but two grains of this "disorganized" (this may be done by calcination of a bone), given to a healthy man, produces great excitement, particularly of the brain. Delirium, inflammation and death may be the result in a single hour. Ten times this amount, taken as nature gives it to us in food, produces no such trouble.

Phosphorus poisoning is characterized by nervous and mental symptoms, jaundice, vomiting, general fatty degeneration, the presence of bile pigments, albumen and other abnormal constituents in the urine, followed by death.

Chronic phosphorus poisoning was quite common among workers in match-factories. Necrosis of the jaw bone was one of its frequent results. It ranks with mercury in its power to wreck the bones.

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#4 Yesterday, 05:13 PM

Sue

Member Join Date: Oct 2004

Posts: 1,663

Medscape – March 4, 2005

More info.

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<http://www.medscape.com/viewarticle/500884>

Jaw Osteonecrosis Associated With Bisphosphonates in Some Cancer Patients

Reuters Health Information 2005. © 2005 Reuters Ltd.

By Lisa Richwine

GAITHERSBURG, Md. (Reuters) Mar 04 – Novartis AG has received 875 reports of jaw problems in cancer patients treated with two bisphosphonates, but it is not clear if the medicines are responsible, company officials told a U.S. advisory panel on Friday.

A Food and Drug Administration official said there was a "highly plausible" sign the cases were related to the drugs, Zometa (zoledronic acid) and Aredia (pamidronate disodium). FDA officials urged further study to determine who might develop the problem and if steps could be taken to minimize the risk.

Zometa and Aredia are used to treat multiple myeloma as well as bone metastases from solid tumors.

Novartis added a warning to the labels of both drugs last year to alert doctors to the reports of osteonecrosis of the jaw, or ONJ. The severity of the condition varies but it can lead to disintegration of the jaw, Novartis officials and others told an FDA advisory panel.

"We do not have an understanding of what is causing this to happen in a small number of cancer patients. Further investigation is necessary," said Dr. Diane Young, vice president and global head of clinical oncology development for Novartis.

More than 1 million patients have been treated with Zometa since its launch in 2001, Novartis said. Aredia is available generically, and Novartis no longer promotes the brand name version.

"These drugs have been shown to markedly reduce bone pain," while the risk of ONJ "is a minor one," said Dr. James Berenson, director of the multiple myeloma and bone metastases programs at Cedars–Sinai Medical Center in Los Angeles and a Novartis consultant.

The FDA panel did not make any formal recommendations for regulatory action, but some members said Novartis should do more to alert dentists, patients and others to the issue. The company said it sent letters about the cases to physicians last year and contacted patient groups and printed brochures.

Carol Pamer, a reviewer in the FDA's Office of Drug Safety, said ONJ is rare but the agency had received a steadily increasing number of reports of the condition in patients who were treated with Zometa or Aredia.

"We believe these cases present a highly plausible safety signal" for the drugs, she said.

Felice O'Ryan, an oral surgeon who traveled from California to testify before the panel, said she had seen an increase of ONJ cases in her practice recently, and some cases were severe.

"I do not consider these problems minor or insignificant, nor do my patients. The FDA and Novartis have done a very poor job of informing people about this particular risk," she said.

Sue

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#3 11–16–2004, 11:37 AM

gocanes

Member Join Date: Oct 2004

Posts: 71

As promised, here are the before and 6 months after–bx photos. There has been a slight amount of gingival growth around the exposed bone:
[Attached Images](#)

Last edited by gocanes : 11–16–2004 at 11:41 AM.

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#2 11-05-2004, 01:41 PM

Sue

Member Join Date: Oct 2004

Posts: 1,663

Quote:

Originally Posted by gocanes

Biphosphonates such as Didronel, Fosamax and Zometa are popular drugs used to treat osteoporosis, Paget's disease, metastatic cancer, and hypercalcemia, among other things. These drugs inhibit bone turnover by interfering with osteoclastic activity. Because they bind to exposed bone at high levels and are not metabolized, they remain in the area in high concentrations for long periods of time.

I recently had a female patient taking Zometa who abraded a small torus on her palate and the area would not heal. I sent her to my OS who levelled the torus and achieved primary closure. The microscopy was negative for anything beyond inflamed bone tissue. It has been over a month, the gingiva has sloughed and the area will not heal. She has about a 1cm X 1cm area of exposed bone on her posterior palate. The surgeon does not want to re-operate and is contemplating HBO therapy. I'll post the pictures next week.

I post this as a warning to those who might have a patient on these drugs who requires any type of oral surgery, even simple extractions. Your patient is at risk for delayed healing and potential osteonecrosis. It would be wise to refer to an OMFS unless you know how to treat such complications.

Here is a citation:

Ruggiero SL, Mehrotra B, Rosenberg TJ, Engroff SL

Osteonecrosis of the jaws associated with the use of bisphosphonates: a review of 63 cases.
J Oral Maxillofac Surg. 2004 May;62(5):527-34.

Craig,

I read the article as I think that patients need to be advocates for their own health as well (and I have two friends that are on Fosamax so I was interested!). BTW, one of these is a male (osteoporosis can occur in men as well).

My comment.

Besides increased prevalence of post-surgical complications for these pts, even more disturbing (in my mind) is that for these patients, their lesions were refractory to conservative debridement and antibiotic therapy.

Therefore your suggestion to refer these patients directly to OMFS should be taken very seriously, IMHO.

Thank you for the information.
-Sue

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#1 11-04-2004, 08:00 PM
gocanes
Member Join Date: Oct 2004
Posts: 71

Osteonecrosis of the Jaws and Biphosphonates

Biphosphonates such as Didronel, Aredia, Fosamax and Zometa are popular drugs used to treat osteoporosis, Paget's disease, metastatic cancer, and hypercalcemia, among other things. The manufacturer of these drugs is now recommending to physicians that a dental examination and preventive dentistry regimen be implemented prior to biphosphonate therapy for patients with "concomitant risk factors (e.g. cancer, chemotherapy, corticosteroids, poor oral hygiene)."

The bisphosphonate class of drugs inhibit bone turnover by interfering with osteoclastic activity. Because these drugs bind to exposed bone at high levels and are not metabolized, they remain in the area in high concentrations for extended periods of time.

I recently had a female patient taking Zometa who abraded a small torus on her palate and the area would not heal after several weeks. I sent her to my OS who removed the torus and achieved primary closure. The microscopy was negative for anything beyond inflamed bone tissue.

It has been over a month, the gingiva has sloughed and the area has not healed. She has about a 1cm X 1cm area of exposed bone on her posterior palate. She does not complain of pain. The surgeon does not want to re-operate and is contemplating HBO therapy. I'll post the pictures next week.

I post this for consideration and as a potential warning to those who might have a patient on these drugs who requires any type of oral surgery, even simple extractions. Your patient is at risk for delayed healing and potential osteonecrosis/osteomyelitis. It would be wise to refer to an OMFS unless you know how to treat such complications.

Here is a relevant citation:

Ruggiero SL, Mehrotra B, Rosenberg TJ, Engroff SL

Osteonecrosis of the jaws associated with the use of bisphosphonates: a review of 63 cases.

J Oral Maxillofac Surg. 2004 May;62(5):527-34.

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