Osteonecrosis of the Jaw (ONJ)

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This letter will help to update you about where we believe we are now with respect to ONJ – it's etiology, incidence, diagnosis and management and the establishment of a Canadian registry. This information is intended for Canadian OMF surgeons. A Canadian ONJ task force recently met in San Diego in conjunction with the American Society for Bone and Mineral Research. Represented on this task force was General Dentistry, OMF Pathology, OMF Surgery, Rheumatology , Endocrinology., Radiology, and Gynecology.

Nomenclature: We are proposing a name change back to ONJ (from BRONJ) since the discovery of a non bisphosphonate drug (Denosumab) has also been linked to ONJ and also that ONJ can occur spontaneously and as such has been termed non drug induced ONJ. Therefore ONJ can be categorized as drug induced – bisphosphonates or denosumab and non drug induced – spontaneous.

Etiology: The majority of ONJ cases are believed to be associated with the use of either intravenous bisphosphonates or denosumab. The use of denosumab will likely increase as this drug has several advantages over bisphosphonates. Bisphosphonates will continue to be used for osteoporosis, other metabolic bone diseases as well as the skeletal complications of malignancy. The prevalence of spontaneous ONJ cases is unknown. For **oral bisphosphonates** or low dose intravenous bisphosphonates used for osteoporosis, the risk of ONJ is believed to be as low as 1:100,000. For patients at risk there appears to be inciting events such as tooth extraction or other minor oral surgery. Presumably this increases the risk of ONJ but at this point to what degree we do not know. More data is required.

Diagnosis: It is the belief of this task force that any patient with ONJ should be seen and managed by an **OMF surgeon**. In order to diagnose ONJ there needs to be an area of exposed bone that is present for at least 8 weeks in a susceptible individual in the absence of radiotherapy, local malignancy or other explanatory condition. It must be recognized that these can occur spontaneously although presumably less commonly than the drug induced forms. There may or may not be corresponding radiographic findings. A proposed classification of ONJ has suggested Types 0 – 3, corresponding to least aggressive to most aggressive.[1]

Incidence: A prospective trial following 144 multiple myeloma and metastatic cancer patients receiving IV bisphosphonates at the Nova Scotia Cancer Centre from June 2007 through Aug 2011 has revealed an incidence of 3.4% ONJ.[2] There are varying reports in the literature ranging from less than 1% to 12%. [3]

Data from a survey of Ontario OMF Surgeons indicates that the incidence of bisphosphonate associated ONJ is approximately 1 per 100,000 in osteoporosis patients and many of these patients had other risk factors for the condition in addition to being on bisphosphonates. This incidence may not be higher than that seen in the general population. [4]

Treatment: There is confusing information in the literature regarding management of these patients. Few cases will heal spontaneously. Some authors suggest surgery may not help. There are several reports in the literature and among OMF surgeons that suggest surgery is helpful. This is evolving rapidly as more about ONJ is revealed. It is recommended that you do an up to date literature review prior to treating any patients with surgery to get the most current synopsis. There are case reports suggesting that Forteo, an anabolic bone agent, may improve healing.

Canadian Registry: We have established a Canadian registry for ONJ patients for data collection in attempt to learn more about this disease. The email address for the Canadian registry is ONJ@dal.ca. We would ask that you do the following if you have a patient with ONJ:

1. Get simple verbal informed consent from your patient to be contacted and registered by us.

2. Take a clinical photograph and email it along with a radiograph if possible.

3. Email us patient contact information so that our researcher can contact the individual and collect the necessary data. Please include name, postal address, phone numbers and email address. We will take it from there.

54. If a patient fails to consent we would simply like to know that so that we know there is another case of ONJ.

Thank you for helping with this important research.

Upcoming papers: An update outlining these points will be submitted to the JCDA early this year, mostly to educate the general dental community. The prospective trial at the NS Cancer Centre will be submitted to the JOMS this spring as final data collection winds down. Others will be available in various medical journals from the task force this year

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