

Weekly Dental Reader



DENTAL PRACTICE-BASED RESEARCH

Osteonecrosis of the jaw (ONJ) is a debilitating bone condition that results due to reduced local blood supply to the bone. A relatively rare condition, ONJ is difficult to research since most studies cannot identify and evaluate enough cases to accurately determine incidence and associated risk factors.

Two separate *International and American Associations for Dental Research's Journal of Dental Research (JDR)* reports released in February 2011 represent some of the largest published studies to date on ONJ patients, and involved the National Institute of Dental and Craniofacial Research-supported Dental Practice-based Research Networks (PBRNs) in which many HealthPartners dentists are active participants.

“Risk Factors for Osteonecrosis of the Jaws: a Case-control Study” authors A. Barasch, J. Cunha-Cruz, F.A. Curro, P. Hujoel, A.H. Sung, D. Vena and A.E. Voinea-Griffin conducted a case-control study with three DPBRNs to determine the risk associated with bisphosphonates and identify other risk factors for ONJ, including dental diseases and procedures. Researchers enrolled 191 ONJ cases and 573 controls from 119 dental practices. Bisphosphonate use was strongly associated with ONJ with an odds ratio of 299.5 for intravenous use and 12.2 for oral use.

“ONJ in Two Dental Practice-Based Research Network Regions” authors J.L. Fellows, D.B. Rindal, A. Barasch, C.M. Gullion, W. Rush, D.J. Pihlstrom and J. Richman conducted a Dental Practice-based Research Network (DPBRN) study that identified 572,606 health plan members and of those patients, approximately 25,000 had a diagnosis or procedure code that suggested a necrotic bone lesion, including inflammatory jaw condition, cyst of bone,

aseptic necrosis of the bone and open wound of the jaw. Of those members' electronic medical records, a total of 23 ONJ cases were confirmed. Patients with oral bisphosphonates were 15.5 times (CI, 6.0–38.7) more likely to have ONJ than non-exposed patients. However, the number of ONJ cases limits firm conclusions and suggests absolute risks for ONJ from oral bisphosphonates is low.

Thank you to HealthPartners Dentists who have been integral to the success of the DPBRN. Several HP dentists were instrumental in making these two important ONJ studies a success. These efforts benefit not only our patients, but also contribute to knowledge development that benefits the broader dental and medical communities and the public.