Further characteristics of jaw injury and TMD: The OPPERA study

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Today at the 94th General Session & Exhibition of the International Association for Dental Research, researcher Sonia Sharma, University at Buffalo, N.Y., USA, will present a study titled "Further Characteristics of Jaw Injury and TMD: The OPPERA Study." The IADR General Session is being held in conjunction with the 3rd Meeting of the IADR Asia Pacific Region and the 35th Annual Meeting of the IADR Korean Division.

At the 2015 IADR General Session in Boston, Mass., USA, Richard Ohrbach, et al and Sharma et al presented characteristics of jaw injury and incident temporomandibular disorder (TMD), demonstrating that jaw injury of any type occurred more frequently in TMD cases than controls with associated incidence odds ratio (IOR)=4.8. This current study investigated types of injuries, number of injuries, and attribution bias regarding first-onset incidence of painful TMD.

Data were from the OPPERA (Orofacial Pain: Prospective Evaluation and Risk Assessment) nested case-control study of TMD incidence in which community-based adults were enrolled at four U.S. study-sites. At enrollment, participants reported no history of TMD and no facial injury in the past six months. During a median three-year follow-up period, participants completed quarterly (three monthly) follow-up questionnaires assessing jaw injury and TMD symptoms. Symptomatic participants were re-examined; 233 incident cases of TMD and 176 controls were confirmed.

Binary logistic regression models estimated IOR's and associated 95% confidence limits (95%CL). Attribution bias was investigated in a lagged-exposure model that disregarded any injury reported in the same quarter during which TMD incidence was determined.

Prior to their follow-up visit, 89 TMD cases experienced injury in any combination: 7.3% extrinsic, 22.3% yawning and 24.5% sustained mouth opening. Increased TMD incidence was associated with injuries due to extrinsic events (IOR=8.8, 95%CL=1.9,40.1), sustained opening (IOR=5.6; 95%CL=2.7,11.6) and yawning (IOR=3.5, 95%CL=1.8,6.8). Both a single injury (IOR= 4.2; 95%CL=2.2,8.4) and multiple injuries (IOR= 5.7 95%CL=2.2,14.5) predicted greater incidence of TMD than events without injury (IOR=1.4; 95%CL=0.8,2.3). Effects of injury on TMD incidence remained significant in the lagged-exposure model (IOR=2.6; 95%CL=1.6,4.1).

All three types of injury were associated with first-onset TMD and a single injury was sufficient to increase risk of developing painful TMD. There was evidence of only modest attribution bias.

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More information: This is a summary of abstract #0099 titled "Further Characteristics of Jaw Injury and TMD: The OPPERA Study," to be presented by Sonia Sharma on Thursday, June 23, 2016, 11:30 a.m. - 11:45 a.m. at the COEX Convention and Exhibition Center, in room 327B, as part of the session titled "TMD & Related Pain Conditions I."

Provided by International & American Associations for Dental Research