

SAMPLE ABSTRACT

Objective: To evaluate the importance of severe retrognathia as a risk factor for the development of recent onset painful TMJ disorders among adult females.

Design: Case-control study.

Setting: This study was conducted in a large health maintenance organization between 1998 and 1999 [Kaiser Permanente Northwest (KPNW), Portland, OR, USA].

Participants: Adult females with recent onset painful TMJ disorders ($n=29$) and normal controls ($n=104$).

Methods: Cases were recruited from the TMD clinic at Kaiser Permanente Northwest (KPNW). Controls were recruited from a dental clinic at KPNW. Case status was determined using a questionnaire; mandibular sagittal position was determined by measuring a research angle on facial photographs. The mean research angle for cases was compared to the mean for controls. Multivariable exact conditional logistic regression analysis was used to examine the demographic characteristics of cases and controls, and to determine the strength of association between recent onset painful TMJ disorders and severe retrognathia. The population attributable risk percentage (PAR%) and the attributable risk percentage (AR%) were calculated to further evaluate severe retrognathia as a risk factor.

Results: The mean research angle among cases (67.7° ; 95% CI=66.0–69.4) was smaller than among controls (71.6° ; 95% CI=70.7–72.5, $P<0.001$). The odds ratio for the association between case status and the presence or absence of severe retrognathia was elevated (OR=6.3; 95% CI=1.1–47.5, $P=0.039$). The PAR% and AR%, associated with severe retrognathia, were 13.3 and 84.1%, respectively.

Conclusions: Severe retrognathia is strongly associated with recent onset painful TMJ disorders (OR=6.3). Only a small proportion of these disorders are attributable to severe retrognathia among the total population of adult females (PAR%=13.3%). However, a large proportion of these TMJ disorders are potentially attributable to severe retrognathia among adult females with severe retrognathia (AR%=84.1%).