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### PREVALENCE OF INCIDENTAL FINDINGS IN PANORAMIC RADIOGRAPHS IN AN ORTHODONTIC POPULATION

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**Introduction:** About 90% or more orthodontists request pre-treatment imaging, usually a panoramic radiograph. The prevalence of incidental findings on panoramic radiographs in an orthodontic population as well as image quality was assessed.

**Materials and Methods:** Panoramic radiographs of 300 males and females between 10-60 years were selected using an electronic research aid website. Exclusion criteria were systemic disease or a craniofacial syndrome. The "prevalence and bias-adjusted kappa" (PABAK) test showed high intra- and inter-rater reliability ( $>0.8$ ) for every analyzed item, except for some technical or exposure errors. A customized data entry form was used to systematically record and analyze the radiographs independently by 2 observers.

**Results:** The most common findings were unerupted or impacted third molars (14%), missing third molars (12%), calcified stylohyoid ligament (8%), mandibular idiopathic osteosclerosis (7.5%) and maxillary sinus opacification (7%).

**Discussion:** Individualized monitoring or referral may be needed for (a) unerupted third molars since predictive criteria for impaction are unreliable (b) missing third molars or idiopathic osteosclerosis in case tooth-bud development is delayed in the former and symptoms occur in the latter (c) long and symptomatic calcified stylohyoid ligaments (d) maxillary sinus opacification since the panoramic technique facilitates artifacts.

**Conclusion:** 25% of the patients in this study showed at least one abnormal finding. The most common findings were related to development and eruption of third molars and opacifications of the stylohyoid ligament, mandible and maxillary sinus. A referral was merited in 14.5% of cases. Technical and exposure errors were common in the non-dentition areas.