

Association of second-hand smoke exposure, quantified by salivary cotinine, with dental caries in Japanese adolescents

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(日本人の若年者における唾液中のコチニンで定量化した受動喫煙への曝露とう蝕の関係)

区 分 : 甲

論 文 内 容 の 要 旨

Abstract Purpose: Second-hand smoke has adverse effects on oral health. This cohort study used a multilevel approach to investigate the association of second-hand smoke exposure, as determined by salivary cotinine level, with dental caries in adolescents. Methods: Data from 75 adolescents aged 11 or 12 years and 2,061 teeth without dental caries were analyzed in this study. Annual dental examinations to assess dental caries were conducted between 2018 and 2021. Salivary cotinine and *Dentocult SM-Strip level* were measured at baseline. Information on the smoking habits of parents, snack frequency, regular dental visits, and use of fluoride toothpaste was collected at baseline from parent-reported questionnaires. Results: During the 3-year follow-up, dental caries was noted in 21 adolescents and 43 teeth. Participants exposed to parental smoking had higher salivary cotinine levels than those whose parents did not smoke. The multilevel Cox regression model showed that a high salivary cotinine level was associated with the incidence of dental caries, after adjusting for potential confounding factors (hazard ratio, 3.39; 95% confidence interval 1.08- 10.69). Conclusion: This study suggests that the risk of dental caries is higher for adolescents who have high salivary cotinine levels attributable to second-hand smoke exposure.