

Radiographic assessment of proximal surface carious lesion progression in Chilean young adults

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Abstract

Investigate the rate and associations of interproximal carious lesion progression. Retrospective data were analysed from 125 young adults (range: 18-29 years) with repeated bitewing radiographs collected over a 6-year period. Participants were submitted to different protocols of radiographic examination frequency. Transitions from outer enamel to outer dentine (OE-to-OD) and from outer dentine to dentine (OD-to-D) were selected because of their clinical relevance. Factors associated with each transition were assessed in Cox regression models. One hundred seven (85.6%) and 52 (41.6%) participants experienced OE-to-OD and OD-to-D transitions, respectively. In addition, 16.8% of 537 eligible surfaces progressed from OE-to-OD whereas 59.4% of 128 eligible surfaces progressed from OD-to-D. Incidence rates were 6.6 and 44.1 per 100 tooth surface-years, respectively. Mean survival time for OE-to-OD transition was 6.4 years (95% confidence interval: 6.0-6.9) and the median survival time for OD-to-D transition was 1.6 years (95%CI: 1.3-1.7). In adjusted Cox regression models, location in the lower jaw (hazard ratio: 0.34; 95% CI: 0.21-0.57) was inversely associated with OE-to-OD progression. In addition, proximal DMFS at baseline (HR: 0.93; 95%CI: 0.87-0.99) and location in the lower jaw (HR: 0.51; 95%CI: 0.26-0.99) were inversely associated with OD-to-D progression. This group of Chilean young adults has a high progression rate of proximal caries lesions. Location of the caries lesion and proximal DMFS were the only factors associated with caries progression.

Biography:

Alexandre Gomes Rodrigues received his BSc in pharmacy in 2011 in Brazil. He expanded his interests into biotechnology and completed his MSc in an interdisciplinary project involving fungal proteins and metallic nanoparticles at Sao Paulo University. In 2014 he moved to Germany to pursue his PhD in pharmaceutical technology at Martin-Luther-University. His research interests cover the fields of pharmaceutical technology, biomaterials, and biotechnology. He has published scientific peer-reviewed articles and book chapters and has participated in international congresses and conferences in biotechnology and pharmaceuticals.

References

1. Humeres, Paulina & Guzmán-Orellana, Daniela & Madrid-Canales, Carla & Fredes-Ziliani, Amanda & Mustakis, Alexandra. (2020). Cuidado de la salud oral en la primera infancia: La perspectiva de sus madres-un estudio cualitativo.. International journal of interdisciplinary dentistry. 13. 62-66. 10.4067/S2452-55882020000200062.
2. Phillips, Melania & Bernabé, Eduardo & Mustakis, Alexandra. (2020). Radiographic assessment of proximal surface carious lesion progression in Chilean young adults. Community Dentistry and Oral Epidemiology. 48. 10.1111/cdoe.12552.
3. Giacaman, Rodrigo & Aranguiz, Vicente & Botelho, J.N. & Bustos, Ivonne & Cabello, Rodrigo & Candiales, Yuliana & Carrizo, Ana & Carvajal, Claudia & Castro Barahona, Ramiro & Castro, René & Jaime, Díaz & Díaz-Yokens, Marco Antonio & Diaz-Dosque, Mario & Diaz-Garrido, Natalia & Durán, Gerardo & Faleiros, Simone & Flores, Mario & Fonseca, Juan & Fontana, Margherita & Moncada, Gustavo. (2018). Creación de un Currículo de Competencias en Cariología para Estudiantes de Pregrado de Odontología en Chile.. Revista clínica de periodoncia, implantología y rehabilitación oral. 11. 58-68. 10.4067/S0719-01072018000100058.
4. Mustakis, Alexandra & Bruce, Loreto & Soto, Bárbara & Canessa, Francisco & Phillips, Melania. (2016). Caries Epidemiological Profile from Pontifical Catholic University student's health department.
5. Mustakis, Alexandra & Urzúa, Blanca & Moraga, C & Puente, C & Morales, Isis. (2014). Subclinical concentrations of chlorhexidine inhibit gelatinase activity of carious dentine in vitro. Australian dental journal. 59. 10.1111/adj.12147.

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