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Título	A high salivary calcium concentration is a protective factor for caries development during orthodontic treatment
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Resumo	Background: This research aimed to evaluate the salivary concentrations of fluoride (F-), calcium (Ca2+), and phosphate (Pi) after brackets bonding, and to identify the role of [F-], [Ca2+], and [Pi] on the development of active caries lesion (ACL) in individuals under fixed orthodontic treatment. Material and Methods: A longitudinal investigation with twenty-two individuals from 11 to 22 years of age wasperformed in four phases (baseline and after 1, 3, and 6 months). Analyses were carried out considering the salivar concentration of [F-], [Ca2+], and [Pi], as well as the caries index. Data were analyzed using the Friedman test, followed by the Wilcoxon test and the multivariate Cox model ($p \leq 0.05$). Results: 1 and 3 months after appliance bonding, the [Ca2+] was statistically lower than after 6 months ($p < 0.0083$). On the other hand, salivary [F-] and [Pi] did not show any significant difference during the follow-up. The Cox model demonstrated that the increase of 1 µg/mL in Ca2+ decreased the risk of ACL development by 27%. In conclusion, the levels of Ca2+ changed during orthodontic treatment. Conclusions: A high Ca2+ level in the saliva is a protective factor for ACL development over time.
Fomento	