Non-carious cervical lesions: mapping clinical knowledge and management and performance of low-viscosity materials on erosive challenges

Non-carious cervical lesions (NCCL) have a multifactorial etiology, turning diagnosis and consequent clinical management difficult. In this sense, Article 1 aims to evaluate the knowledge of dentistry students and dentists working in Brazil regarding the etiology, diagnosis and treatment of NCCL. Furthermore, considering that restorative procedures are generally performed to reestablish lost tooth structure, it is interesting to investigate the performance of materials facing different challenges. Thus, Article 2 aims to analyze the behavior of low-viscosity materials when exposed to erosive challenge with orange juice. Regarding Article 1, the present work found that students' knowledge regarding the management of NCCL is poorer in relation to dentists, however, etiological and therapeutic issues still seem to be limited for clinicians. In Article 2, a series of properties were evaluated in specimens of resin-modified glass ionomer cement (GC Gold Label 2-GL), conventional flowable resin composites (Filtek Supreme Flowable Restorative-FSF, Beautifil Flow Plus F00-F00) and flowable bulk-fill (Filtek Bulk Fill Flowable Restorative-FBF, Beautifil Bulk Flowable-BBF) without and with bioactive ingredient, respectively. In this work, GL showed less resistance to erosive challenges for both color and Knoop microhardness analysis. F00 was also affected by orange juice, showing lower flexural strength for this condition. BBF demonstrated the highest modulus of elasticity among the resins and generated less shrinkage stress. Furthermore, degree of conversion of these materials was evaluated, reaching a rate higher than 55%. It can be concluded that students and dentists in Brazil have limited knowledge about NCCL, making clinical decision-making difficult. The study also suggests that flowable resin composites could be used when an erosive component is present, especially bioactive bulk-fill.