Analysis of the main stresses on dental crowns

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Keywords. Dental crowns, 3D printing, CAD-CAM technology, FEA, Solid Works

Abstract.
This paper presents an analysis of the main stresses to which dental crowns are subjected. The first part presents a series of aspects regarding the dental biomechanics (mechanical characteristics of hard tissues and periodontal ligaments, identification of masticatory movements and the stresses to which the teeth are subjected). It is very important in the field of dental biomechanics to know how a force is transferred to a tooth root and the surrounding tissues. Because of the difficulty in measuring physical parameters in this region, stress–strain distributions have usually been estimated by finite element analysis (FEA).The most representative materials and the main stages of making dental crowns using CAD-CAM technology are presented. The paper ends with a series of results and conclusions obtained from this analysis.