

Oral rehabilitation after treatment of does sickle cell crises and comorbidities increase the risk of pulp necrosis in healthy teeth?

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Objective: to evaluate the extent to which the number of sickle-cell crises per year (SCCs/year) and the presence of comorbidities (CoMs) are associated with asymptomatic pulp necrosis (APN) in teeth with healthy crowns among patients with sickle cell anemia (SCA). **Material and Methods:** this is a cross-sectional study nested within a retrospective cohort study (local Research Ethics Committee Protocol No. 23115 004993/2010-71). The sample (n = 140) consisted of patients with SCA who were aged ≥ 16 years, possessed at least one healthy tooth, had no history of inferior alveolar nerve paresthesia within the previous 6 months, and had no previous history of dental trauma or periodontal disease. The diagnostic test for APN was performed using pulse oximetry adapted to den-

tistry, in which the percentage of arterial oxygen saturation of the pulp was set at $\leq 79\%$. **Results:** among the 140 patients evaluated, 15 had APN and 125 did not. Two models were tested: one with a dichotomous outcome (having APN or not) and another based on the percentage of teeth with APN; structural equation modeling was used ($\alpha = 0.05$). There was no association between the number of SCCs/year and the two APN outcomes considered herein. The presence of CoMs explained the presence of APN (SFL > 0.999; $p = 0.032$). **Conclusion:** the presence of CoMs in patients with SCA increases the risk of APN in otherwise healthy teeth.

Keywords: Sickle cell anemia; Dental pulp; Dental pulp necrosis; Pulse oximetry.