

ALTERNATIVES FOR TREATMENT OF TOOTH STAINING AFTER ROOT CANAL FILLING: SYSTEMATIC REVIEW

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The microscopic presence of oral epithelial dysplasia (OED) may indicate long- term risk of malignant transformation. The histologic grading of these cellular and architectural abnormalities is the method available to evaluate this malignant transformation potential of OED. This systematic review was designed to examine the research evidence of the predictive ability of binary histologic grading system and to compare binary with the WHO system for predicting malignant transformation. Detailed individual search strategies for 6 electronic bibliographic databases were implemented. Additional grey literature search was made using 4 databases. All searches were conducted up to September 3rd, 2020. A hand search of the references of the selected articles was also conducted. A total of 3,653 studies were selected, after exclusion of the duplicates. In phase 1, 13 studies were selected for full-text reading and 1 additional study were included after a hand search in their reference list. In phase 2, 4 articles met the eligibility criteria and were included in this systematic review. Two were classified as cross-sectional studies and other 2 as cohort studies. Sample size ranged from 68 to 141, totalling 402 OED specimens. OED was assessed by WHO and Binary grading systems in all studies. The ability to predict malignant transformation ranged from 16% to 80% for WHO grading system and from 5% to 80% for Binary system. The data about the interobserver agreement was low to good agreements for the WHO and Binary systems. Overall, the methodology of the studies presented “low” to “moderate” risk of bias. Meta- analysis was performed in 3 of the 4 selected studies. The pooled malignant transformation rate on lesions classified as severe dysplasia or carcinoma in situ by the WHO grading was 40% while in the lesions classified as high-risk by the binary grading system there was a malignant transformation rate of 31%. In conclusion, despite there is evidence that the Binary system present a less interrater variability when grading OED, there is no confirmation that this system is superior to the WHO system in predicting malignant transformation.

Keywords: Oral cancer; Epithelial dysplasia; Malignant transformation; Binary histologic grading system; WHO histologic grading system.

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