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Management of White Spot Lesions During Multibracket Orthodontic Treatment

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Objectives To determine the attitude of Spanish orthodontists regarding enamel white spot lesions (WSLs) associated to multibracket appliance.

Methods A modified version of the questionnaire designed by Weyland et al., (2022) was electronically distributed through mail or social media to Spanish orthodontists. The questionnaire consisted of four sections: 1) Demographic data, professional activity; 2) WSLs characteristics; 3) Strategies to prevent WSLs; 4) Management of WSLs during treatment and once it was completed. Chi-square, one-way ANOVA and Student t-tests were performed ($p < 0.05$).

Results 199 responses were collected. Most of the respondents (72.4%) focused their clinical activity on Orthodontics exclusively and affirmed to detect WSLs in a lower percentage than poor oral hygiene and gingivitis. WSLs were present in only 12.5% of the patients, corresponding mostly to 12-15 years. Lesions usually appeared after 9 months of treatment (46.3%), poor hygiene being the main cause declared. All respondents give oral hygiene instructions, before and during treatment, not based on patient's caries risk (57.7%). Fluoride varnishes and gels were widely applied in the practice and fluoride mouthrinses for individual use at home. When WSLs appeared during treatment the most frequent decision was to warn patients parent-guardian (53.7%) with premature removal of brackets as a residual choice (0.5%). Patients with WSLs after brackets removal were referred to general dentists in 34.2% of the cases while bleaching or resin infiltration were strategies not selected by 75% and 40.2% of the respondents, respectively.

Conclusions Spanish orthodontists observe WSLs related to multibracket treatment mainly in adolescents and in a low percentage. Their management strategy is based on professional fluoride application during treatment. WSLs detected after brackets removal are referred to the general dentist for treatment.