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## **Clarification/ Correction:**

Sections of the following text were slated to appear in Table V of “Part 1: The Anatomy of Evidence-Based Publications: Article Summaries and Systematic Reviews,” in the Spring 2004 issue of *JDH*. The table, which originally appeared as an appendix in Volume 2, Number 1 of the *Journal of Evidence-Based Dental Practice*, is reproduced here as Table V.

## ARTICLE ANALYSIS & EVALUATION

### Air-abrasion treatment of questionable incipient pit-and-fissure caries lesions does not preserve more tooth structure

Original Article:	Hamilton JC, Dennison JB, Stoffers KW, Welch KB. A clinical evaluation of air-abrasion treatment of questionable carious lesions. A 12-month report. J Am Dent Assoc 2001;132(6):762-9.
• Level of Evidence:	4 (intermediate results of randomized trial; level of evidence may increase during planned follow-up)
• Purpose:	To assess the effect of air-abrasion of questionable incipient pit-and-fissure caries lesions when compared to delaying treatment until caries into the dentin are diagnosed
• Source of Funding:	Dental Fund of Michigan
• Type of Study/Design:	Split-mouth randomized controlled trial

### SUMMARY

#### SUBJECTS

The study examined 223 teeth in 93 patients, aged 12 to 36 years. All patients originated from the general dentistry clinics at the University of Michigan School of Dentistry. All teeth had questionable incipient pit-and-fissure carious lesions (free of frank caries: softness at the base of a pit or fissure, decalcification).

#### EXPOSURE

The authors assessed immediate air-abrasion treatment (n = 113) versus delayed treatment when caries into the dentin was diagnosed (n = 110).

#### MAIN OUTCOME MEASURE

The study used the volume of the cavity preparation using weight as an approximation for

#### MAIN RESULTS

The study showed the weight of the immediate air abrasion treatment cavity preparation was on average 0.027 g versus 0.020 g in the control preparation group ( $P = .279$ ).

### COMMENTARY

#### CONCLUSIONS

The authors concluded that there was no benefit in early treatment of incipient pit-and-fissure caries with air-abrasion techniques. They found that the preparation volume was not statistically different if the treatment was early air-abrasion or control and subsequent treatment.

#### ANALYSIS

This article presents itself as a realistic and necessary approach to a common concern regarding the treatment of questionable pit-and-fissure lesions. Does the patient gain something when air-abrasion treatment is used? And when early intervention is used, is there a smaller preparation involved and is more tooth structure saved? The authors proposed to conduct a randomized clinical trial to demonstrate the value in treating questionable pit-and-fissure lesions early. Weaknesses of the study are

that it was not explained how the volume of the preparation was measured and how examiners were calibrated.

The most interesting finding of this study is the low progression rate of questionable initial pit-and-fissure caries lesions. The authors originally postulated that 25% of the untreated incipient pit-and-fissure caries lesions would progress. After they had completed the cavity preparations in the teeth in the group treated with immediate air-abrasion, and noted that 44% of the questionable pit-and-fissure lesions had caries into the dentin, the authors feared that even more than 25% would progress to caries into the dentin. Yet, after 12 months only 11% had progressed to a clinical diagnosis of caries-into-the-dentin. Long-term results in this sample will provide valuable data to further determine the dynamics of mineralization and demineralization of early caries lesions.