
Evaluation of Halitosis in Children and Mothers Using Organoleptic and Halimeter Tests. MI Lin, CM Flaitz, AJ Moretti, SV Seybold, J-W Chen. University of Texas Health Science Center Dental Branch, Houston, TX.

Although a common problem, few studies have assessed halitosis in children. The purpose of this clinical study was to investigate the occurrence and clinical parameters that are associated with halitosis in pediatric dental patients and compare these findings with the mother. In addition, the use of a commercial breath analyzer (CBA) (Halimeter[®], Interscan Corp) for the detection of volatile sulfur compounds (VSCs) was compared to a breath odor questionnaire and an organoleptic evaluation. Consecutive children, 5-12 yrs old, with mothers present during a dental visit were evaluated. Each mother completed the child's medical history and the questionnaire. Mother and oral breath judge (OBJ) evaluated the child's oral breath using the organoleptic tests (flossing, wrist lick, whole mouth breath). The CBA measured the oral and nasal levels of VSCs for both child and mother, according to manufacturer's instructions and was repeated following tongue debridement. Oral appliances, caries (dmfs/dmft, DMFS/DMFT), modified plaque and gingival indices, tongue coating (0-4), and tonsil size (0-4) were recorded for children only. Results included 30 children with mean age of 8.8 yrs (67% female, 33% male) and 18 mothers. Halitosis, as measured by oral and nasal VSC levels above 100 ppb, was diagnosed in 23% of children and 11% of mothers. In contrast, 61% of mothers reported breath odor in themselves and child. From the questionnaire, significant differences were found between VSC levels and frequency of toothbrushing ($p < 0.05$, univariate analysis of variance). No significant correlations were found for VSC levels and mother/child pairs and for the clinical parameters evaluated, including tongue coating. Paradoxically, tongue debridement significantly increased VSC readings ($p < 0.001$, paired sample correlation). There was significant correlation in the detection of breath odor between mother and OBJ ($p < 0.05$, Pearson); however, there was no significant correlation between both evaluators and the CBA, except for the wrist lick test ($p < 0.05$, Pearson). The results suggest that halitosis is a problem in some healthy children but it does not correlate well with mother's breath odor or common oral parameters. In this study, the organoleptic tests and the CBA results were inconsistent, suggesting that other factors besides oral VSCs may be associated with breath odor in children.