

## SUMMARY

Despite great improvements in the oral health of populations across the world, dental caries still persists particularly among poor and disadvantaged groups in both developed and developing countries, being in children the most prevalent daily problem that dentist face. According to the World Health Organisation (WHO)-Oral Health Report 2003-, dental caries remains a major public health problem in most industrialized countries, affecting 60–90% of schoolchildren and the vast majority of adults. The use of fluorides in the prevention of dental caries has demonstrated a dramatically drop of dental decay levels around the world.

**OBJECTIVE:** The aim of our work was to evaluate the use of two topical fluorides in the prevention of dental caries.

**METHODS:** Approximately 60 children in good general health, divided in two groups, 1st phase mixed dentition (group 1, mean age: 7.21) and deciduous dentition (group 2, mean age: 3.84) were selected for this study. Deciduous and permanent molars were divided in pairs and randomly received fluoride gel (1.23%), fluoride varnish (0.1) or placebo each six months during two years. The DMFT and dmft were registered and applications of topical fluoride each six months were supplied during two years. Evaluation of dental plaque, streptococci mutans levels, carbohydrates consumption and instruction of dental hygiene were also included since the first step and in each control. Onset data and those after two years were compared by paired Student's t-test at  $P=0.05$  and correlation coefficients were calculated.

**RESULTS:** onset data: group 1: DMFT 0.96, group 2: dmft 1.73. Data after two years; group 1: DMFT 1.62 ( $P<0.05$ ), group 2: dmft 3.40 ( $P<0.05$ ). We also found statistical significant reduction of sound teeth in molars and an increased of DMFT and dmft scores in the group of molars that received placebo ( $P<0.05$ ).

**CONCLUSIONS:** After two years of topical fluoride applications, parental instructions and following oral health status, we found that topical fluorides –in the way of gel and varnishes- reduced dental caries levels in deciduous and permanent molars. The use of topical fluorides as regular preventive therapy against dental caries in children is recommended.