

Silver Diamine Fluoride is Capability to Prevent Dental Decay in Preliminary Dentition

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INTRODUCTION

Dental caries is a painful ailment that can cause nutritional issues that affect a child's overall health and is also expensive to cure. The World Health Organization (WHO) has identified early childhood caries as a global issue. According to reports, this condition affects between 60% and 90% of people. Furthermore, according to figures released by European nations, 61% of children aged 6 to 12 have at least one tooth that is damaged by dental caries. In addition to having a negative impact on children's oral health, dental caries is so common that it may place a financial burden on society.

Modern dental caries management takes a conservative approach. Early detection of non-cavitated lesions, determining the child's caries risk, determining the disease's activity, valid and reliable surveillance to choose the best conservative approaches, and monitoring the signs of caries arrest or the progression of the carious lesions are all included in this. Topical fluoride administration can stop caries activity without the need for surgical interventions.

Due to their capacity for remineralization and their antibacterial qualities, fluoride compounds that may be applied topically, such as Sodium Fluoride (NaF) varnishes, are utilised for preventive. With an off-label usage to stop the carious process, Sodium Diamine Fluoride (SDF) was approved by the FDA in 2014 as a therapy for sensitive teeth. In addition to its cariostatic effects, 38% SDF creates an environment that prevents the dentin collagen enzyme from being activated. The efficiency of SDF and NaF in stopping the caries process in primary and mixed dentition has been reported in several investigations. In 375 youngsters (ages 3-5), the efficacy of SDF and NaF in stopping dentin caries. Five groups were created for the kids. After the soft carious dentin lesions were dug, children in the first and second groups got an annual administration of silver diamine fluoride solution (44,800 ppm F). Every three months, children in the third and fourth groups have been applied sodium fluoride varnish (22,600 ppm F).

DESCRIPTION

The efficiency of various topical fluoride products and materials, such as New Nano-Silver Fluoride (NSSF), Silver Nitrate (AgNO_3), Sodium Fluoride (NaF), and Glass Ionomer Cement (GIC) restorative material, in halting caries. The research that is now available, however, suggests that SDF might be an effective solution in halting tooth cavities and a suitable replacement for the extensively used topical fluoride treatments and materials. However, this requires a thorough and methodical assessment of the evidence about the clinical effectiveness of each treatment or material in halting caries in primary and early mixed dentition.

Additionally, although studies have demonstrated that the SDF is helpful in halting the growth of oral carious lesions, the precise mechanism is unclear. Observation, administration methods, goals, recruited groups, and findings have all been employed differently in articles examining the efficacy of the SDF in halting carious lesions. The purpose of this study is to assess SDF's ability to stop carious lesions in primary and early mixed dentition in a systematic manner.

CONCLUSION

Early childhood caries have been recognised as a global problem by the World Health Organization (WHO). In youngsters aged 6 to 12, dental caries has caused at least one tooth damage in 61% of cases. Fluoride compounds, such as varnishes containing sodium fluoride, can be used as a preventative measure. The environment produced by 38% SDF stops the dentin collagen enzyme from activating. The effectiveness of SDF and NaF in preventing caries has been documented in numerous studies. This study is the first to systematically evaluate SDF's efficacy to prevent carious lesions in primary and early mixed dentition. A cautious strategy is used in the management of dental caries today.

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