Prevalence of toothpaste swallowing habit in children between the age group of 3 and 5 years

B. Aishwarya Reddy, Dhanraj Ganapathy*, P. Kiran Kumar

INTRODUCTION

Toothpaste has a history that stretches back nearly 4000 years. Until the mid-19th century, abrasives used to clean teeth did not resemble modern toothpastes. People were primarily concerned with cleaning stains from their teeth and used harsh, sometimes toxic ingredients to meet that goal. Modern toothpaste was invented to aid in the removal of foreign particles and food substances, as well as cleans the teeth. Toothpastes typically contain mild abrasives to clean tooth surfaces like calcium carbonate; they also contain fluorides like sodium monofluorophosphate to remineralize the teeth. Chalk was commonly used as the abrasive in the early part of the 20th century.[1,2]

Toothbrushing is an aid for oral hygiene care. Effective brushing with selected toothpastes helps in removing dental plaque that contributes to dental caries. Nowadays, different types of toothbrushes and pastes are available in market, which are specially designed for children. In general, the type, frequency, and quantity of toothpastes which are used by children are based purely on parental preference.[3-5]

A smear of toothpaste is enough for kids under three; a pea-sized amount is right for 3–7 years old, while anyone older should just use a ribbon of paste along the brush. You should brush a child’s teeth for 2 min twice a day and get them to spit. At night-time, do not let them eat or drink after brushing. This allows the fluoride to strengthen the teeth overnight.[6] Fluoride is a mineral found naturally in water, soil, and air. Almost all water contains some fluoride, but fluoride levels can vary depending on where your water comes from. Fluoride toothpaste contains a higher concentration of fluoride than fluoridated water does, and it is not meant to be swallowed. Fluoride helps prevent tooth decay by keeping tooth enamel strong and inhibiting the growth of bacteria in plaque. When fluoride is in the stomach, it can cause irritation, leading to nausea, vomiting, and diarrhea. That is why children who eat toothpaste may develop minor gastrointestinal symptoms. To minimize the risk of swallowing, try angling your baby’s head slightly downward so that any extra toothpaste dribbles out their mouth. As long as you are using the recommended amount of toothpaste, swallowing a little bit should not cause any

ABSTRACT

Introduction: Toothpaste is a paste or gel dentifrice used with a toothbrush to clean and maintain the esthetics and health of teeth. Toothpaste is used to promote oral hygiene; it is an abrasive that aids in removing dental plaque and calculus from the teeth. Salt and sodium bicarbonate (baking soda) are among materials that can be substituted for commercial toothpaste. Large amounts of swallowed toothpaste can be toxic. Materials and Methods: An online questionnaire was prepared using SurveyPlanet and was circulated among 75 parents of children between the age group of 3 and 5 years having toothpaste swallowing habit. Results: About 96% of the children have the habit of toothpaste swallowing. Intestinal problems are seen in more children and also few children’s complaint about stomach pain. Most of the parents prefer low fluoride toothpaste for their children. Conclusion: Most of the children between the age group of 3 and 5 years have the habit of toothpaste swallowing. The most seen side effects are intestinal problems and stomach pain. Nowadays, as people are more concerned about hygiene, most of the children brush twice a day.

KEY WORDS: Children, Fluoride, Hygiene, Swallowing, Toothpaste

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Department of Prosthodontics, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

*Corresponding author: Dr. Dhanraj Ganapathy, Department of Prosthodontics, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India. E-mail: dhanrajmganapathy@yahoo.co.in

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problems. If you use a larger amount and your baby or toddler swallows it, they may develop an upset stomach.\cite{7,9}

The majority of the population know that brushing your teeth twice a day is essential for oral health, but none of them follow. In case of children, it is always better to make them brush twice a day using the toothpaste only for once. Brushing twice prevents the gum problems and also removes the leftover food debris. Hence, this reduces the bacteria in the oral cavity. Children develop the ability to spit at around the age of 3. If this happens, giving them milk or another dairy because calcium binds to fluoride in the stomach and can damage tooth enamel and cause dental fluorosis, which causes white stains on the teeth.\cite{10,11} Their risk of damage depends on the amount of fluoride they ingest and how long they continue doing so. Assisting and watching them when they are brushing their teeth is important so that the parent applies the amount of toothpaste needed, while also keeping the toothpaste away from them. Consulting a pedodontist will give the best advice on choosing the right toothpaste. Their advice is the best as they help us being away from toothpaste containing harsh ingredients that can erode and wear away young tooth enamel. Certain abrasives found in toothpaste are essential for polishing and removing plaque from adult teeth but can be too strong for children’s teeth. Hence, parents must use only children’s toothpaste for their child till the child turns seven.\cite{12,13}

MATERIALS AND METHODS

An online questionnaire was created using SurveyPlanet and was circulated among the parents of the children from the age group of 3–5 years. The sample size was 75. The questionnaire consists of 10 questions. The data were collected and statistically analyzed.

RESULTS

The study’s sample size comprised 75 parents of children between the age group of 3 and 5 years. The sample represented toothpaste swallowing habit in children. Nearly, the entire sample had the habit of toothpaste swallowing. While 96% of them were aware of the complications and only 4% of them are aware of the remedies to be taken when a child swallows toothpaste. Throughout the sample, 22.6% were having no side effects and only 77.4% were having complications among which 41.3% were having intestinal problems and 36.1% were having stomach pain.

DISCUSSION

Among 75 children, 83% of the children have the habit of toothpaste swallowing \cite{Figure 1}. Nowadays, many children have the habit of toothpaste swallowing as brushing their teeth can be more than a good hygiene practice; it can be an opportunity to snack on some tasty toothpaste. Children’s toothpaste often tastes such as bubble gum or candy, so the temptation to eat toothpaste is considerable. Around 96% of the parents were aware of the complications associated with it, only 4% of them were not aware of the complications \cite{Figure 2}. The complications which are observed more often are nausea, diarrhea, vomiting, stomach pain, gastrointestinal problems, and difficulty in breathing. When asked if the child complains with any pain, 36.1% of the children were complaining about stomach pain. 41.3% faced intestinal problems and 22.6% of the children had no complications \cite{Figure 3}. These complications are seen in children who use half the length of toothpaste on the brittles. Usually, children under the age of 6 years should only use pea-sized amount of toothpaste.\cite{14,15}

Only 7% of the parents are aware of the fluoride content in their child’s toothpaste. Parents should be aware regarding the fluoride content of their child’s toothpaste as this is one of the main factors

![Figure 1: Toothpaste swallowing habit in children](image1)

![Figure 2: Parents aware of complications](image2)
affecting the child’s oral cavity. 91% of the parents use children’s toothpaste for their children, 5% of them use high-fluoride toothpaste, and 4% of them use herbal toothpaste. Although many parents use children’s toothpaste for their child, there are few parents who use high-fluoride toothpaste for their children. Toothpaste given to a child which is high in fluoride content will cause stains ranging from yellow to dark brown. Criteria for the toothpaste selection were based on taste, brand, and dentist’s advice. 56% of the parents select the toothpaste based on the taste, 33.3% of them select the toothpaste based on the dentist’s advice, and 11% based on the brand [Figure 4]. Most of the parents buy toothpaste which is in fruity flavors as it is easy to make the child brush without any tantrums. Television endorsements with celebrities are one of the main reasons why people prefer branded things. The same applies even to toothpaste. There are parents who are more worried about their child’s health; hence, they prefer dentist’s advice rather than taste and brand. 51% of the children brush twice a day and 49% of them brush once a day which more or less the same. Brushing twice a day is advisable for children, but only peaped amount of toothpaste must be used. 96% of the parents are not aware of the remedies to be taken when child swallows toothpaste. Only 4% of them are aware of the preventive measures and remedies to be taken when a child swallows toothpaste [Figure 5].

CONCLUSION

Most of the children between the age group of 3 and 5 years have the habit of toothpaste swallowing. The commonly seen side effects are intestinal problems and stomach pain. However, not many parents were aware of the remedies for these effects and also the fluoride content of the toothpaste. Nowadays, as people are more concerned about hygiene, most of the children brush twice a day. Hence, parents must make sure that they assist their child regarding the quantity of the toothpaste used. Parents should also be aware about the remedies to be taken when the child swallows a large amount of toothpaste.

REFERENCES


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