

# A Rare Case Report on Sewing Needle as an Interdental Aid: Ignorance or Paucity of Oral Health Education

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## ABSTRACT

The regular use of interdental aids for maintenance of oral hygiene is relatively sparse especially in the developing countries like Nepal. Rather, use of home-based alternatives is more popular among people, which may cause injury to both the hard and soft tissues of oral cavity. This case reports a 14-year-old-female patient who used sewing needle for removing lodged food which broke and got embedded in the buccal mucosa. Exploration of the site of injury revealed the broken needle which was retrieved under topical anaesthesia. Lack of awareness is still a major hindrance causing poor oral hygiene practices among people. Promotion of effective oral health at all levels is the need of hour for achieving holistic health care of especially the dependent population. It is thus high time that we, as dentists evaluate our role in the society and ponder upon the oral health education provided to patients regarding oral health.

**Keywords:** Buccal mucosa, dental devices, foreign objects, needles, oral health, oral hygiene.

## INTRODUCTION

Regular use of proper oral hygiene aids has remained a neglected issue especially in the developing countries. This negligence causes food lodgment in between teeth which further can result in problems such as caries, periodontitis, gingival abscess, alveolar bone resorption etc.<sup>1</sup> The most effective way to remove lodged food is with the help of interdental aids,<sup>2</sup> however, the use of readily available home-based alternatives such as toothpicks, safety pins, broomsticks, and sewing needles have also been reported.<sup>1</sup> These alternatives are found to cause injury to both the hard and soft tissues and may even become a potent source of pain/infection.<sup>3</sup>

## CASE REPORT

A 14-year-old female patient reported to the Pediatric Emergency at B.P. Koirala Institute of Health Sciences,

Dharan with a chief complaint of piercing of right cheek region with a sewing needle two days back while attempting to remove food particles from the teeth. The needle broke and got embedded into the buccal mucosa, which could not be retrieved by either the patient or her parents. The patient complained of pain and swelling without any history of pus discharge from the region. Her medical history was also not significant.

On examination, swelling was present on the right buccal mucosa of approximately 1.5×1 cm<sup>2</sup> with a pinpoint opening representing the point of entry of the needle (Figure 2). On palpation, a linear object could be felt on the right buccal mucosa of approximately 1.5 cm in length.

Ultrasonogram of the right cheek showed a linear echogenic structure of size approximately 5.5 mm in length with distal acoustic shadow in right cheek in the subcutaneous plane - likely to be a foreign body (Figure 3).

Exploration of the site of injury was done under local anesthesia spray and a broken sewing needle of 2.3 cm in length was retrieved (Figure 4). Irrigation was done with 0.2% chlorhexidine and normal saline. A radiograph was taken after retrieval of the sewing needle to confirm its complete removal followed by prescription of oral antibiotics for five days. The patient had uneventful

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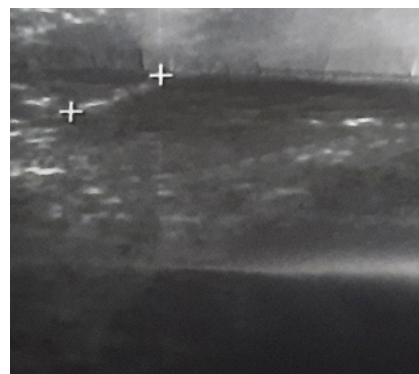
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**Figure 1.** Pre-operative extra-oral photograph.



**Figure 2.** Pre-operative intra-oral photograph showing pinpoint opening.



**Figure 3.** Ultrasonogram of the right cheek showing foreign body.



**Figure 4.** Broken needle retrieved from the right buccal mucosa.



**Figure 5.** Immediate post-operative intra-oral photograph.



**Figure 6.** Three months follow-up intra-oral photograph showing completely healed wound.

recovery post-operatively with satisfactory healing of wound at three months follow-up.

## DISCUSSION

According to the American Dental Association, oral health is defined as “a functional, structural, aesthetic, physiologic and psychosocial state of well-being and is essential to an individual’s general health and quality of life”.<sup>4</sup> Thus, it is evident that oral health is a major determinant of the overall health status of an individual.

Oral hygiene is the practice of keeping the oral cavity clean and healthy by brushing and flossing regularly to prevent dental caries and periodontal diseases.<sup>5</sup> As the saying goes “Children are like wet cement; whatever falls on them makes an impression” so, good oral hygiene practices should be integrated into children from an early age to instill a positive dental attitude for the future.<sup>5</sup> To achieve good oral health, toothbrush and other oral hygiene aids should be used regularly and appropriately.<sup>6</sup> However, in developing countries like Nepal, oral hygiene is poor with inadequate, improper and irregular tooth brushing, not rinsing the mouth after eating sweets, wide-

spread substance abuse and addiction, excessive use of acidic drinks, increased consumption of refined sugar and sweetened foods,<sup>5</sup> and inadequate use of interdental aids. Basnet et al.<sup>7</sup> reported that only 1.2% of the participants were found to use dental floss, with 0.7% using interdental brush, and majority (28.3%) to have used home-based remedy i.e., toothpick.

Children are inquisitive by nature and as they develop, they learn to explore their surroundings with the help of their tactile sensation. Children often place foreign objects in their mouth that are readily available such as pens, pencils, toothpicks, stapler pins, or wires to remove food particles that are entrapped inside the open pulp chambers of fractured teeth or those lodged in between the teeth. These acts provide a sense of relief from irritation caused by the entrapment of food within and/or in between the teeth. In the present case as well, the patient used a sewing needle for removing food lodged in between her teeth. However, the sewing needle broke and got embedded in the buccal mucosa. Most of the time, children do not reveal their act to the parents so long as any complications like pain or infection develop. Dental neglect on the part

of the parents also plays a role in the inappropriate use of home-based remedies by children resulting in long-term sequelae before the foreign object is discovered, in case of any mishaps.<sup>3</sup> Whenever any foreign object is lodged in the soft tissues like gingiva, soft palate, buccal mucosa, etc., it may lead to inflammation and scarring of the tissues. The other possible sequelae of an embedded foreign object in the oral cavity include pain, swelling, infection, abscess, cyst, and tumor-like appearance.<sup>3</sup> Also, if timely intervention fails, there are chances of foreign body reaction, granuloma formation, and a development of non-healing pathology over a long period.<sup>3</sup>

A detailed patient's history, clinical examination along with appropriate radiological imaging techniques such as plain radiographs, magnetic resonance imaging, ultrasound, and computed tomography are the keys for the accurate diagnosis and prompt detection of foreign objects.<sup>8</sup> In order to locate the foreign objects which are not detectable on plain radiographs, pre-operative ultrasound has proved to be helpful. Ultrasound imaging has been widely accepted as a safe, quick, and cheap imaging technique with the ability to detect objects even smaller than 1 mm.<sup>9</sup> In the present case as well, ultrasound was used for the detection of the foreign object in the buccal mucosa which are readily available in most emergency departments.

The attitude of people toward their oral health and the attitude of dentists who are responsible for providing oral care play a vital role in regulating the oral health status of the people.<sup>10</sup> Children learn by seeing, hearing and

observing others, so it is equally important to educate the parents, teachers and society as a whole to create a positive impact on children. As stated by the World Health Organization, the most cost-effective approach which we can adopt to decrease the burden of oral disease, maintain a healthy oral and overall quality of life is by promoting oral health.<sup>1</sup> Thus, it is crucial that we not only focus on providing treatment but also in creating awareness among people regarding importance of oral health and proper hygiene maintenance.

## CONCLUSION

Lack of awareness about the proper use of oral hygiene aids led to the use of a sewing needle, accidental breakage and embedment of it while removing food lodged between the teeth by child patient. However, timely recognition of the problem by the parents, proper investigation for localization of the foreign object and intervention helped us to prevent further severe consequences in the present case.

It is of paramount importance that we dentists should start more community-oriented programs at local and national levels to create awareness among people regarding the importance of oral health to enlighten appropriate ways for good oral hygiene maintenance.

**Conflict of Interest:** None

INAPD

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