Foreign Bodies in the Oral and Maxillofacial Region: Report of Two Cases

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ABSTRACT
Foreign bodies are often encountered by oral and maxillofacial radiologists and may present a diagnostic challenge to the oral physician due to many factors, such as the size of the object, the difficult access, and a close anatomic relationship of the foreign body to vital structures. Foreign bodies in orofacial region are usually the result of injuries or operations or iatrogenic procedure. Fragments of broken instruments can be left behind or in some cases entire teeth or their fragments can be displaced during extraction. Foreign bodies like air gun pellets may also get lodged in the jaw bones, paranasal sinuses or in the soft tissue due to accidental injury. This article, reports two cases of foreign bodies, i.e. suture needle which is kept after operation of cleft palate, air gun pallet injury occur in childhood. Foreign body injuries in the maxillofacial region should be properly diagnosed using radiographs, for its proper surgical retrieval to prevent complications.

Keywords: Foreign bodies, Suture needle, Air gun pallets.

INTRODUCTION
Foreign body (latin: corpus alienum) is microscopic or macroscopic object introduced into the human body at the time of an operative procedure, iatrogenic procedure or by accidental injury. Foreign materials may be left inside the patient’s body while operating or while surgery like needles, instruments, towels, etc. In dentistry, while operating traces of amalgam, broken instruments may also be found in the gingiva and root canals. Some of the materials like root canal instruments, orthodontic bands may also be accidentally swallowed by the patient. Needle breakage has most frequently in relation with the inferior alveolar nerve block. Air gun injuries most of the time are accidental. Proper diagnosis using history and radiographic examination should be made for retrieval of those materials. Two such cases of foreign bodies had been reported to the Department of Oral Medicine and Radiology, CDCRI, Rajnandgaon.

CASE REPORT

Case 1
A 15-year-old male patient came to the Department of Oral Medicine and Radiology, CDCRI, Rajnandgaon with the chief complaint of malalignment in his upper front teeth. Patient's medical history revealed the history of surgery for cleft palate 9-year back. Extraoral examination showed facial asymmetry, saddle nose and healing cleft below the nose, with short upper lip. Intraoral examination revealed crowding with maxillary anteriors, nonhealing maxillary alveolar cleft with palatally erupting 61 (Fig. 1).

The patient was advised periapical and occlusal radiograph. Periapical radiograph of maxillary anterior region showed maxillary cleft along with a linear radiopaque material most probably a needle (Fig. 2).

Fig. 1: Intraoral examination showing nonhealing alveolar cleft

Fig. 2: Periapical radiograph showing linear radiopaque material
Occlusal radiograph confirmed the presence of needle which might had left inside while operating for the cleft palate (Fig. 3).

**Case 2**

A 44-year-old male patient came to the Department of Oral Medicine and Radiology, CDCRI, Rajnandgaon with chief complaint of loose teeth. Patient’s medical history was not significant. He has undergone extraction 1 week back. Extraoral examination was found to be noncontributory. Intraoral examination revealed teeth present 14, 15, 32, 42 which were grade III mobile and 33, 34, 35 and 45 which were grade II mobile. He was advised OPG from the department of prosthodontia. OPG revealed a well-defined round radiopaque mass about 5 mm in diameter found 5 mm below the infraorbital canal (Fig. 4). For further evaluation of exact location of the foreign body lateral cephalogram (Fig. 5) was advised and the foreign body was found to be located in the floor of orbit.

History revealed that he and his sibling were playing at home with air gun 30 years back. His sibling was aiming at the target with air gun when he accidentally came into the range of air gun and was hit by the air gun pallet. He was standing approx. 4 m distance from his sibling. He experienced severe pain and was taken to a primary health center from where he got medication and dressing for the wound. But no further treatment was done.

**DISCUSSION**

Foreign material may be inserted into the body while undergoing operative procedure. This may be done deliberately or accidentally. In most cases foreign material which are left behind are sutures material, surgical drains, wound gauze packs and needles. In our first case suture needle was accidentally left in the maxillary anterior region by the surgeon while undergoing surgery of cleft palate. Many techniques have been used to localize foreign bodies in the head and neck. Plain film radiographic techniques like panoramic or a lateral cephalometric, anterior-posterior radiograph is advised. In our case we had taken occlusal, periapical and lateral cephalogram radiograph to locate the foreign body.

Air gun injury is accidental and most of the time occurs in the children. Depending on the type of air gun, the velocity of the projectile and distance at which it is fired and anatomic site of penetration determine the gravity of injury. Low velocity projectile can cause penetrating wounds that creates small entrance and exist wound. In our case patient in childhood suffer a air gun injury and as it is of low velocity it was asymptomatic and reported on incidental finding while taking a OPG. The projectile from air gun, besides causing immediate and acute trauma can also cause late complications if not removed. In the paranasal sinuses it may cause chronic inflammation, rhinorrhea and neuralgic type of pain. According to these findings, it can be suggested that pellets can retain for long years without any appreciable symptoms, and may left in situ without any intervention, which corroborate some reports of literature. All patients should be properly screened before undergoing an MRI imaging study. Metallic foreign bodies, such as bullets or shrapnel may present a hazard to the patient because they can be moved or twisted by the strong magnetic fields encountered in MR imaging studies.
Air gun injuries have a wide clinical presentation from minor injuries to more serious life-threatening injuries. Modern air gun muzzle velocity can be as high as that of conventional gun. Therefore, air gun must be considered a lethal weapon and not a mere toy.\(^6\)

### REFERENCES


### CONCLUSION

Needle breakage and retention of needle have been a problem since long. It is necessary to determine the exact location of the needle through radiographs. It is advised removing the needle as soon as possible to prevent complications from needle migration into vital structures of the head and neck.\(^8\)

Fig. 5: Lateral cephalogram of the patient showing foreign body in the floor of orbit below the infraorbital foramen