

Swallowed and Aspirated Objects

- Q. Recently, a finished crown that I was attempting to cement disappeared down a patient's throat. The patient coughed for a few minutes, but she seemed all right after that. She said she thought she had swallowed the crown, which sounded reasonable considering that her coughing had stopped. I suggested that she check her stools for the next few days to verify the passage of the crown. Was there anything else I should have said or done?
- A. Foreign objects that disappear down the oropharynx may represent a significant health hazard as well as a malpractice risk. While foreign body aspirations are less common than ingestions, the potential consequences are considerably more serious and the medical care needs more urgent. Prompt, appropriate action, coupled with good documentation, is essential in this situation.

Don't assume that because the coughing stopped, the object must have been swallowed. In fact, whenever a foreign object is lost in the posterior pharynx, it is prudent to assume it has been aspirated, even if the patient exhibits no symptoms of airway obstruction. Aspirated objects pose an immediate hazard to the patient's life and health.

Once you have confirmed that your patient has a patent airway, your priority is to locate the crown internally. Inform the patient of the need for a chest x-ray to determine the location of the crown, then transport the patient to a medical care facility. You or a staff member should drive the patient to the facility and accompany the patient until he or she is discharged.

Do not let the patient drive to the hospital or physician's office, as an object causing a partial obstruction can move and cause a complete airway obstruction. As a result, the patient may lose consciousness and control of the automobile.

If the patient is absolutely certain she ingested the object rather than aspirated it, it is still optimal to refer for medical evaluation and follow-up imaging. Even small objects may irritate or partially obstruct the digestive tract or contribute to gastrointestinal problems. Your suggestion to confirm clearance of the crown was appropriate. In every instance, referral to a physician is the most prudent course of action, as it demonstrates that the dentist was acting in the patient's best interest.

Document in the patient's chart your actions following the incident. This should include your recommendation of a medical evaluation, including imaging, how the patient was transported for medical evaluation and by whom, and any telephone discussions with the medical facility and treating physician. A copy of the treating physician's report should be retained in the patient's file.

If you performed emergency procedures, such as the Heimlich maneuver, document those actions and their results. Also note all preventive measures (rubber dam, pharyngeal drape, etc.) that had been taken to prevent the swallowing or aspiration of the object and any pre-treatment referrals or discussions about referrals.

If the patient refuses to pursue medical evaluation, document the reason for the patient's refusal and ensure that the patient understands the potential for acute and chronic complications resulting from the foreign object.

Prevention

A wide variety of dental objects have been ingested or aspirated by patients. The items are usually small to moderate in size but larger items (such as removable appliances or prostheses) are also rarely involved. Examples include:

- Dental instrument fragments (explorers, periodontal probes, curettes, and scalers), endodontic files and reamers, dental burs, prophylaxis cups and brushes, handpiece heads, cavitron tips, mirror heads, implant screwdrivers, rubber dam clamps, rubber dam fragments, suture needles, amalgam restorations, castings, temporary crowns, space maintainers, orthodontic bands, impression materials, teeth and tooth fragments.

There are a number of clinical techniques that can be used to minimize the chance that an object will be ingested or aspirated during treatment. They include:

- Rubber dam—arguably the best preventive device; however, it is not always possible or practical to use
- Pharyngeal gauze block
- High velocity evacuator—to remove tooth and restoration fragments
- Dental floss—tied to rubber dam clamps and other small instruments; tied around bridges
- More upright chair position
- Modified patient head position—turn the patient's head toward the side of treatment, allowing objects or debris to fall onto the buccal mucosa or into the buccal vestibule

Other preventive steps include good patient communication and proper staff training.

- Warn patients that temporary crowns can loosen and unseat.
- Provide written home care instructions to patients who have received a temporary crown or who have been directed to self-administer at-home dental treatment, such as the use of orthodontic keys or elastics. The written instructions should direct the patient to appropriate medical or dental care following any at-home swallowed object incident.
- Develop an action plan to respond to in-office swallowed and aspirated object incidents and train your staff on its implementation. Include in the action plan that a staff member may be required to transport the patient to a medical care facility as part of his or her job responsibility. A recent *Journal of the American Dental Association (JADA)* article proposes an office protocol. See *JADA*, May 2014 ([http://jada.ada.org/article/S0002-8177\(14\)60039-8/abstract](http://jada.ada.org/article/S0002-8177(14)60039-8/abstract)).
- Train all office personnel in basic life support, including the Heimlich maneuver.

Remember to contact your malpractice insurance agent in a timely manner to report the swallowed or aspirated object incident. These incidents, especially those involving aspirations, have the potential to result in financially severe claims. Good risk management can prevent or minimize some claims and provide a better defense for the others.

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