

Body Piercing and Airway Management: Photo Guide to Tongue Jewelry Removal Techniques

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Body modification has been practiced in cultures around the world for thousands of years. The ramifications of body piercing on anesthesia practice and airway management have become more evident in recent years. This article reviews the techniques for removal of tongue jewelry and options for maintaining oral piercing patency.

To remove or not to remove...that is the question. In the emergency medicine and anesthesia literature, there are arguments both for and against the routine removal of oral jewelry for intubation. Some practitioners feel that if people can eat, drink, talk, and sleep with

the jewelry in place, they probably can be intubated safely without removing it. Most case reports present the opinion that tongue jewelry should be removed before oral intubation to minimize jewelry aspiration, bleeding, and medical-legal risks to the anesthetist. This article's focus is to illustrate suggested tongue jewelry removal techniques for awake and unconscious patients from the health practitioner's and body piercer's perspectives.

Key words: Anesthesia, body piercing, intubation.

A review of the literature finds 3 articles that detail the complications of nasal jewelry displacement associated with intubation.¹⁻³ Four case reports detail successful oral intubation, bag-mask ventilation, and laryngeal mask airway placement with tongue jewelry in situ.⁴⁻⁷ The patients in these 4 cases refused to remove the oral jewelry, and elective or emergent airway management was performed.

Two cases in the literature specifically address localized bleeding at the tongue jewelry site associated with direct laryngoscopy.^{8,9} In regard to infections and tongue edema, published articles are limited, with only 2 detailing tongue/maxillofacial infections and 1 describing significant tongue edema without the subsequent need for intubation.¹⁰⁻¹² Although facial piercings, such as those to the eyebrow, lips, and cheek, are becoming more common, the inability to bag mask ventilate patients

wearing facial jewelry because of a poor seal has not been documented. Similarly, the dreaded complication of tracheal aspiration of jewelry is frequently described as a possibility; however, no cases of this complication are documented.^{6,10,13,14}

Tongue Jewelry Removal Overview

Although rings are used occasionally, barbells are the jewelry that anesthesia professionals will encounter in the midline of the tongue most commonly (Table 1). With most barbells, one or both ends unscrew, and the remaining portion of the jewelry can be withdrawn through the tongue (Figure 1). However, there is a new generation of "press-fit" barbells. Unlike conventional barbells, these do not unscrew, but simply pull apart in the middle for easy removal (Figure 2). Whatever type of jewelry is found in the tongue, when combined with proper patient positioning, gauze can be an invaluable resource both to

Type of tongue piercing	Anatomical position of jewelry	Approximate healing times (wk)	Common types of jewelry placed
Lingual frenulum (rare)	Laterally, through the frenulum (web under the tongue)	6-8	Barbell, bent barbell, or ring
Tongue	Vertically through the midline groove and lateral fold of the tongue, although some get "venoms or snake bites" through the sides of the tongue	4-6	Barbell
Tongue (tip)	Vertically through the apex (tip) of the tongue	4-6	Ring or barbell

Table 1. Summary of Tongue Piercings

(Thanks to Elayne Angel from Rings of Desire (www.ringsofdesire.com) for her invaluable help with the creation of this table.)



Figure 1. Conventional Barbells
 (Photo courtesy of Industrial Strength Body Jewelry at www.isbodyjewelry.com.)

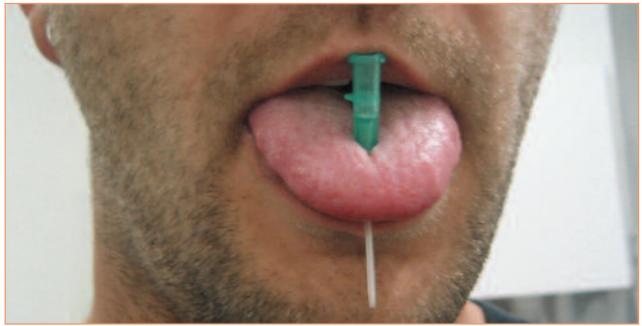


Figure 4. Intravenous Catheter with Transfer Technique to Remove Tongue Jewelry
 (Photo courtesy of MedPierce, Inc at www.medpierce.com.)

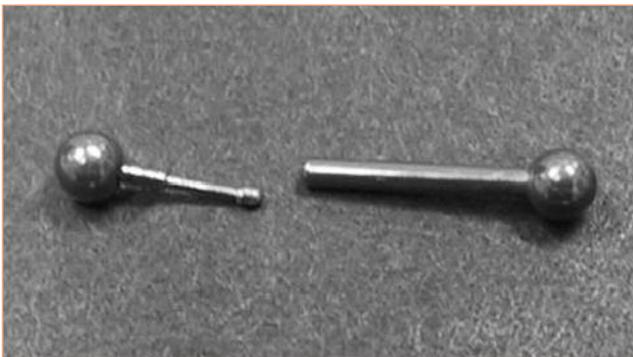


Figure 2. Press-Fit Barbells
 (Photo courtesy of Elayne Angel, Rings of Desire.)

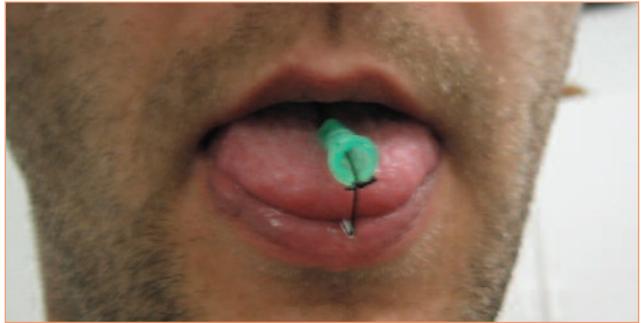


Figure 5. Intravenous Catheter and Suture Used as Tongue Piercing Retainer
 (Photo courtesy of MedPierce, Inc.)

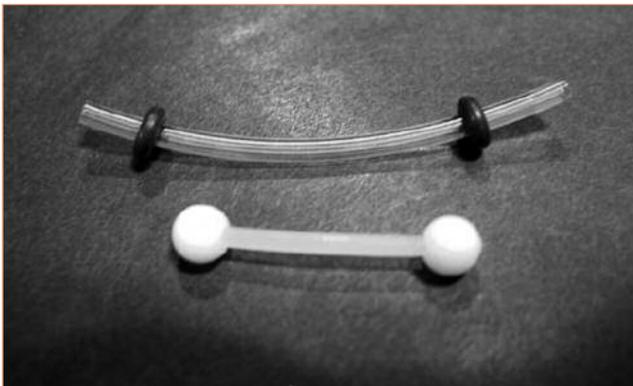


Figure 3. Barbell Retainers
 (Photo courtesy of Elayne Angel, Rings of Desire.)



Figure 6. Loop Technique with Microbore Extension Tubing Used as Tongue Piercing Retainer
 (Photo courtesy of MedPierce, Inc.)



Figure 7. Microbore Extension Tubing Barbell Technique Used as Tongue Piercing Retainer
 (Photo courtesy of MedPierce, Inc.)



Step 1. If possible, have the patient sit up, lean forward slightly, and extend the tongue.



Step 2. Gently grasp the barbell with gloved hands and gauze. Always keep your fingers in contact with the jewelry. Unscrew the ball from the barbell on the top or bottom of the tongue and hold onto it with your forefingers.



Step 3. Once the ball has been removed, keep hold of the tongue and barbell with one hand and gauze. It may be easiest to place the ball aside before going to Step 4.



Step 4. Gently slide the remaining jewelry out through the tongue.

Figure 8. Conscious Patient and Tongue Jewelry Removal
(Photos in Figure 8 are from the Emergency Body Piercing Jewelry Removal Kit, courtesy of MedPierce, Inc.)

dry/grasp the jewelry and to use as a throat pack in the posterior pharynx to minimize the aspiration risk.

Several authors describe the use of barbell retainers as a middle-of-the-road approach to removal. The metal jewelry is replaced with a plastic barbell, epidural catheter, intravenous catheter, or thick suture to maintain the piercing tract patency.¹⁵⁻¹⁹ Although there are commercially available barbell retainers for tongue jewelry, body piercers' experiences with these devices have shown that they can come apart more easily than conventional metal jewelry, increasing the risk of potential aspiration (Figure 3). An option is to use an intravenous catheter to push out the jewelry and pass a thick

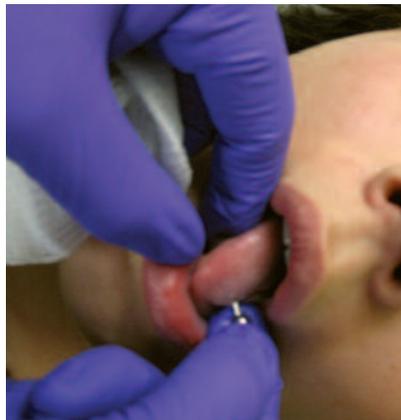
suture through the catheter to secure it and keep the hole open for tongue, navel, ear, and other piercings (Figures 4 and 5).¹⁵⁻¹⁹ Although this technique is an option for tongue jewelry, according to pierced patients it is very uncomfortable.

In the personal experience of the authors, the technique that is easiest to perform and most comfortable for the patient is to push the jewelry out with microbore extension tubing. This tubing is readily available in the anesthesia setting and is flexible enough to be looped or knotted easily and secured in place before laryngoscopy (Figure 6). After the procedure, the jewelry can be replaced by the patient. Another option is to tie the tubing

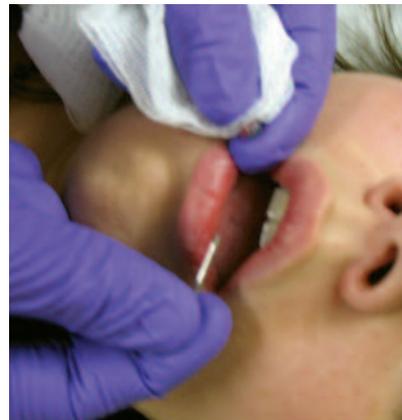
Step 1.



Step 2.



Step 3.



Step 1. If possible, position the patient on his or her side before removing the jewelry. Grasp the tongue with gloved hands and gauze and then gently pull the tongue out until the jewelry may be manipulated securely.

Step 2. Grab the ends of the barbell between your thumb and forefinger with each hand. Using gauze may help you get a secure grip on the jewelry. Always keep your fingers in contact with any jewelry parts to prevent aspiration. Once the ball has been removed, keep hold of the barbell with one hand and gauze and place the ball aside.

Step 3. Gently remove the remaining portion of the jewelry from the tongue and set aside. Complete the removal process by replacing the tongue into the mouth.

Figure 9. Unconscious Patient and Tongue Jewelry Removal

(Photos in Figure 9 are from the Emergency Body Piercing Jewelry Removal Kit, courtesy of MedPierce, Inc.)

1. Cut off a 4- to 6-in length of 0.060-in inside diameter microbore tubing.
2. Tie a square knot as close to one end as possible without compromising the security of the knot. It is critical that this knot is secure to avoid aspiration.
3. Insert the tubing from the bottom of the tongue.
4. Tie another square knot to secure the tubing on the top of the tongue. Hold the bottom knot securely with one hand, while carefully pulling the knot tight on the top.
5. Trim off excess, without compromising the integrity of the knot.

Table 2. Suggested Technique for Using Microbore Extension Tubing as a Tongue Piercing Retainer

in a barbell shape and allow the patient to return to a professional piercer for reinsertion with the tubing as a retainer (Figure 7 and Table 2).

In summary, while some practitioners routinely recommend that all jewelry must be removed, others feel a selective approach to removal of oral jewelry is appropriate. Suggested techniques for removal of tongue jewelry in awake and unconscious patients are illustrated (Figures 8 and 9). If removal is to be undertaken, the utmost care should be taken to minimize the risk of aspiration of jewelry, and consideration should be given to the use of a jewelry retainer to prevent the patient from having to undergo a second tongue piercing.

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