

Tongue piercing: Case report and review of current practice

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Abstract

Although oral piercing has been an uncommon practice in the Western world, the insertion of metal objects into intra-oral and peri-oral pierced sites is growing in popularity. Tongue piercing is one such practice whereby a metal barbell is inserted into the tongue after piercing with a 14-16 gauge needle. Pain, swelling and infection are the most serious consequences associated with this procedure. Other adverse outcomes include mucosal or gingival trauma, chipped or fractured teeth, increased salivary flow, calculus build-up, and interference with speech, mastication and swallowing. This article presents a case report on tongue piercing and highlights the procedure involved. Special attention is given to complications and dental implications associated with such an unusual practice.

Key words: Tongue piercing, dental implications, case report.

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Introduction

It is now quite common for males and females to wear ear jewellery in single or multiple pierced sites. This ornamentation is regarded as a form of conventional use of jewellery. Body art, however, encompasses acts such as tattooing and the wearing of jewellery in non-traditional, unconventional sites. The main reason for wearing such jewellery seems to be for cosmetic purposes, although wearing such items in unconventional sites such as the tongue may carry underlying oral sexual connotations, namely heightened sexual pleasure for partners.

Body piercing appears to be an ancient practice,^{1,2} but until recently oral piercing has been limited

largely to developing countries. The piercing of oral soft tissues and the placement of ornaments is somewhat more novel in Western civilizations, but is growing in popularity. Oral body art, as it is referred to, usually involves piercing of the tongue, cheeks, lips, or uvula. The lip is the most commonly pierced site, but tongue piercing is becoming more prevalent. With the growing number of oral piercings being performed, it is vital that dentists are aware of the risks, complications and dental implications associated with such procedures. This article includes a case report on tongue piercing, and presents the topic of oral piercing with special emphasis on complications and dental considerations.

Case report

A twenty-five year old Caucasian female patient presented for a dental consultation regarding tongue piercing. The patient was interested in obtaining a professional opinion on the matter from a dental practitioner as the piercing involved oral tissues. The patient had obtained relevant information from the piercer who was to perform the procedure; she had also consulted the Internet home pages for additional insight into the subject. Further questioning revealed that she had body piercings and body art elsewhere on her body.

After listening to the patient's requests and the details provided about the piercing procedure, the dental practitioner advised against the tongue piercing and explained the reasons and possible complications such an act could cause. The patient decided to give the matter further consideration.

One week later the patient returned to the surgery with an oedematous tongue and reported difficulty in speech and mastication. A medical history revealed past allergic reactions to penicillin antibiotics and pethidine opioid analgesics. Clinical examination revealed a metal barbell transfixed through the tongue (Fig. 1). The tongue had been

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Fig. 1. – Metal barbell inserted through the patient's tongue along the midline. Tongue shows considerable swelling. Photograph taken on day three following oral piercing.

pierced with a 14 gauge needle without anaesthesia and was not painful. The tongue bled slightly after the piercing procedure, and the patient had been advised by the piercer to rinse with Cepacaine‡ mouthwash after each meal. She had also been advised to take Nurofen§ soon after the piercing to help reduce the swelling, and to avoid unnecessary oral contact during the 4-6 weeks healing period. The onset of swelling was noted 6-8 hours following the procedure and had increased over the next 3-4 days, especially after prolonged conversations, meal times and physically active periods. The metal barbell had interfered with speech, mastication and swallowing since its insertion.

Discussion

Although oral piercing is an unusual practice, lip and tongue piercings are gaining popularity. Tongue piercings are usually performed with a 14 or 16 gauge needle in a two-step procedure. The dorsal surface of the tongue is marked with an indelible pen, usually along the midline and anterior to the lingual fraenum. The tongue is held with a clamp or haemostat and the needle is used to pierce the tongue in a ventral-dorsal direction. The needle is then removed and the free end of the temporary metal jewellery is inserted through a plastic sheath transversing the tongue. Once the barbell shank is in place, the plastic sheath is removed, and a ball-shaped tip is screwed into place and secured with a pair of pliers. The barbell initially placed has an 18 mm long shank to accommodate the increased swelling during the next 5-6 days. Approximately two weeks later the 18 mm barbell is removed and a

shorter one, 12-15 mm long is inserted as the permanent jewellery. If an oversized barbell is not used at the initial placement, oedema could cause it to be embedded in the tongue. The barbell would then need to be surgically removed.

Most oral jewellery comes in the form of studs, rings or barbell-shaped devices which are usually made from either surgical-grade stainless steel or 14 carat yellow or white gold.

There are potential risks and adverse consequences associated with any surgical-type procedure, and oral piercing is by no means devoid of such hazards. The procedure is performed by self-trained non-medical/dental personnel with varying levels of expertise. These so-called 'professional piercers' operate in established tattoo and piercing shops, and try to adhere to infection control guidelines.

Complications and possible adverse consequences of oral piercing³ are outlined in Table 1. The most obvious complications are those of pain and swelling. The piercing is carried out without anaesthetic, and although no pain was experienced in the case reported here, it would seem that oral pain following such a procedure is inevitable, especially if performed unskillfully. Oedema of the tongue is a feature of all tongue piercing because of the vascularity of the area, and can be marked, causing airway obstruction and embedding of the metal barbell into the body of the tongue during healing. This is a serious problem that requires use of anti-inflammatory agents to control the swelling.

Piercing of oral sites is associated with a high risk of infection because of the large and diverse oral microflora present and the possible transmission of organisms such as HIV, hepatitis B and C, herpes simplex virus, Epstein-Barr virus and candida. The pierced site should be kept as clean as possible and an antiseptic mouthwash should be used 3-4 times daily until complete healing occurs.

Table 1. Complications and possible adverse consequences of oral piercing

Oral pain
Oedema
Infection
Disease transmission
Airway obstruction secondary to swelling
Prolonged bleeding
Chipped or fractured teeth
Mucosal or gingival trauma
Interference with mastication and swallowing
Speech impediment
Hypersalivation
Hyperplastic or scar tissue formation
Nerve damage and paraesthesia
Aspiration of jewellery
Foreign body incorporation into site of piercing
Obstruction of radiographic images
Calculus formation on metal surfaces
Metal hypersensitivity

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If a patient does present with inflammation and pain from an oral piercing, removal of the jewellery, local debridement, and use of chlorhexidine and antibiotic therapy should help resolve the problem and accelerate the healing process. The patient's progress should be monitored to avoid spread of infection through fascial planes. Perkins *et al.*⁴ reported a case of Ludwig's angina secondary to tongue piercing, associated with pain and swelling of the tongue and floor of the mouth. Antibiotic therapy proved unsuccessful, and intubation was required to secure the patient's airway. The barbell was removed from the tongue and the floor of the mouth was surgically decompressed with three extra-oral drains.

The issue of infection control is paramount in these situations, and the piercer who performed the procedure in the case reported here, appears to have addressed the problem adequately. All instrumentation and jewellery are autoclaved, and only single-use disposable needles are used. Disposable latex gloves are worn at all times.

Other dental complications include chipped or fractured teeth during function, mucosal or gingival trauma from the metal barbells, increased salivary flow, calculus build-up on the lingual surface of the metal jewellery, and interference with speech, mastication and swallowing.

Chipped or fractured teeth are the most common dental problems observed, followed by trauma to the lingual anterior gingiva.⁵ These can usually be rectified by restoring the broken teeth, and either removing the insert or using a shorter barbell. However, if the jewellery is removed for a prolonged period (1-2 hours), the opening through the tongue will spontaneously occlude.

Although patients in two other case studies^{6,7} denied having speech impediments, the patient referred to in this report experienced speech difficulties 24 hours following the piercing, and

reported problems pronouncing 's, sh, th, ph, f, v, j' during the first week of healing. No further difficulties were observed following this period.

Conclusion

With the growing popularity of oral piercing, dental practitioners should be aware of the possible problems associated with such an unusual practice, and be prepared to address them accordingly. Dentists should also be able to provide consultation to patients contemplating oral piercing. While many oral piercings probably resolve uneventfully, the wide range of possible adverse outcomes associated with the procedure make it difficult to condone.

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