Body piercing has become increasingly popular in Western countries, especially among young people. However, not everyone is aware of its potential risks, which may develop local and systemic complications shortly after, or long after the piercing procedure. Given that the oral cavity is one of the most frequent sites for piercing placement, the aim of this paper is to familiarise the oral healthcare professional with oral piercing and its possible sequelae in order to educate patients prior to and after piercing practices and address any complications that may arise.

Key Words: Piercing, oral complications, legal aspects

Body piercing is the perforation of the skin or mucosa for the purpose of inserting adornments, usually metallic, such as hoops, bars, rings, etc. Piercing is one of the most ancient forms of body art and body modification known to man.

For example, the Egyptians pierced the navel as a sign of nobility. In ancient Rome, members of Caesar’s bodyguard unit pierced the nipples for loyalty or as part of their clothing to hang the short capes they wore. The Mayans pierced the tongue as part of spiritual rituals. Still today in India, jewelry is used in the nose and some ethnic groups in Brazil adorn the lips with painted wood disks after marrying. The Surma tribe of Ethiopia wears large plates in the lower lip.

However, in the last decade, piercing has become popular in Western culture for different reasons than ritual or spiritual. Nowadays, piercing is a social phenomenon, especially among young people, used for self-expression, belonging to urban gangs, and ornamental or sexual purposes. Piercing is usually performed in the ears, eyebrows, oral cavity, nipples, navel, and genitals, although it can also be found in other various sites.

Types of oral and perioral piercings

Oral and perioral piercing can be found in different sites, especially in the lips, tongue, cheeks, frenum and uvula, being the tongue the most common.

There are two types of tongue piercing: The dorso-ventral consists of a bar with a ball at each end (barbell), located in the middle of the tongue and in front of the lingual frenum. As its name indicates, it is inserted from the dorsal to the ventral surface of the tongue (Figure 1A). The dorsolateral piercing is located on the lateral border of the tongue with the two ends on the dorsal surface. This is an uncommon piercing as it is not a safe procedure due to the vascularity and innervation of the tongue.

Another type of piercing is the labret which is placed on the lower lip above the labiomenatal groove. It consists of a bar with a ball at one end located on the outside, and a flat surface inside the oral cavity (Figure 1B, 1C). Other lip piercings include rings which can be placed anywhere around the vermilion border, the lower lip being the most frequent site.

Other less common locations are the cheeks, where piercings are known as dimples, due to the usual location of dimples; the lingual frenum, also called ‘web’ piercing, and especially the uvula because there are inherent difficulties in performing the piercing as well as risks of nausea, throat irritation and dysphagia.
Complications of oral piercing

Piercing has become a very common practice in recent years, although piercees are not aware of the potential risks and side effects. Therefore, it is important to understand that piercing is not exempt from both local and systemic complications. Depending on when these effects arise they can be categorised as acute, occurring during or shortly after the initial procedure, or chronic, in the longer term.

Most complications result from improper use of piercing materials and the lack of expertise of the person performing the piercing, for example manual dexterity, sterilisation and disinfection measures, anatomy of the site, characteristics of the tissues to be worked on, and the possible complications that can develop during the procedure.

Acute complications

These complications include common ones such as inflammation and oedema, pain, interference with speech, mastication and swallowing, as well as allergy to piercing materials.

There are other less frequent complications that should also be considered. These include increased salivary flow, nerve damage, local infections, galvanic currents during contact between piercing and restorations, taste alteration and prolonged haemorrhage, with a case of hypovolemic shock being reported. Compromised airway due to oedema or aspiration of jewellery, bacterial endocarditis, and even a case of Ludwig’s Angina and brain abscess have also been seen after a tongue piercing procedure.

Chronic or long term complications

Long term complications can be either local or systemic and include bacterial endocarditis and transmission of infectious diseases such as HIV/Aids and Hepatitis, especially B and C, resulted from improper disinfection and sterilisation of piercing equipment. Another serious effect is the compromising of the airway or digestive tract due to aspiration of loose jewellery.

Local complications are usually the result of repeated trauma to the different tissues in the oral cavity caused from jewellery. They are related to the most frequently performed oral piercings: tongue and lip piercing, especially the labrette.

The most common complications of tongue piercing include abrasion and fracture of teeth (Figures 2 and 3) and restorations, especially molars and central incisors, caused by the continuous biting or rubbing of jewellery against the teeth. Furthermore, there is increased possibility of dental damage during mandibular block anaesthesia, due to lack of sensitivity, until it wears off.

Additionally, periodontal alterations such as gingival recession on the lingual aspect of the lower incisors, and loss of attachment in various sites have been seen.

Another complication, which cannot be overlooked by the piercer, is embedded jewellery in tissue due to tongue inflammation and oedema after piercing. If a bar longer than the tongue bulk is not placed in the beginning, jewellery can become engulfed in tissue, which may require a surgical excision to unscrew and remove the adornment.

Other complications include healing delays and keloid formation. A case of a bifid tongue due to poor healing as a result of infection following a tongue piercing procedure has also been reported.
Figure 4. Gingival recession following lip labrette piercing

Labrette piercings can cause gingival lesions (Figure 4), especially on the vestibular aspect of the lower anterior teeth. The tendency to continually rub the metal against the tissues, can lead to gingival recession, hyperplasia or even attachment loss of those teeth.

Other local complications include the inability to maintain adequate oral hygiene, bacterial plaque build up, calculus formation on metal surfaces, halitosis, and radiographic interference, even with extraoral piercings such as nostril adornments. Jewellery should be removed prior to radiographic exposure to avoid artefacts which can obscure a potential finding, and ensure a correct diagnosis.

Dental considerations

Oral piercing is being observed more frequently in dental patients. Therefore, it is important for the oral healthcare professional to be familiar with oral piercing practices and possible sequelae in order to educate patients who are considering the procedure. Patients should also be advised against bad habits as a result of wearing a piercing to prevent potential tissue lesions (Table 1).

Oral piercing aftercare and maintenance

During the 4-6 week healing period after a piercing procedure the use of mouthwashes such as chlorhexidine and saline rinses is recommended as is consuming a soft diet, avoiding spicy food and abstaining from smoking and alcoholic beverages. Oral contact of any kind including kissing and oral sex should also be avoided for at least two weeks to reduce the risk of local infection. Patients should be informed about optimal oral hygiene and professional care to prevent bacterial plaque build-up which piercees are more prone to develop.

Once the wound is healed it is important to continue performing adequate oral hygiene, cleaning jewellery after each meal, and removing it frequently to clean it thoroughly. Special care should also be taken during sports activities, taking jewellery off if possible, to prevent soft tissue dilaceration and hard tissue lesions.

Management of the dental patient

When a patient with an oral piercing arrives at the dental office, all jewellery should be removed prior to any dental procedure, especially when mandibular block anaesthesia is involved. The patient should be advised not to re-insert the jewellery until the numbness has completely worn off as there is an increased possibility for unintentional self-harm due to lack of sensitivity.

Before exposure to radiography, it is recommended that all metallic adornments, including piercings, are removed in order to prevent interference and obscure the radiographic diagnosis.
Table 1 Summary of Complications of Oral Piercing

1. Pain
2. Oedemas (risk of lingual oedema and respiratory consequences) and inflammation (even granulomatosis)
3. Infections (local, Ludwig’s Angina)
4. Halitosis
5. Transmission of infectious diseases (bacteraemia, endocarditis, hepatitis-B, C, D, G-, HIV, herpes, pseudomonas, tetanus, tuberculosis, etc.)
6. Haemorrhage
7. Dilaceration and perforation
8. Fracture and chipping of teeth and fillings (rubbing, playing with, biting against other teeth, traumatic risk, risk in sports)
9. Pulpal sensitivity (galvanism)
10. Scarring (retractions, keloids)
11. Hypersensitivity-related reactions
12. Interference with radiography (alteration/difficulty in diagnosis)
13. Nerve damage (paraesthesia)
14. Risk of jewelry becoming loose (airway and digestive tract compromise)
15. Gingival trauma (periodontitis even gingival recession)
16. Mucosal trauma
17. Interference with mastication
18. Interference with swallowing
19. Speech impediment (phonation)
20. Hypersalivation
21. Bacterial plaque build-up and calculus formation on metal surfaces
22. Oral hygiene difficulty

Legal considerations: piercing practices regulations

Given the great increase in piercing practices, it would be advisable for sanitary authorities to establish legislation to regulate the practice of body piercing. Some countries have already laid down different standards and functional and technical criteria, which in certain cases have been appended to the legislation applied to hairdressers’ shops, beauty salons and cosmetic treatments, as well as to security measures applied in multiple fields to prevent the transmission of contagious/infectious diseases. However, in other cases, specific regulations have been considered due to the growing popularity of body piercing. To date, in Spain, some Autonomous Communities have enacted regulations on body piercing. For example, in 1989, the Basque Country established hygienic/sanitary standards for non-healthcare workers in order to prevent bloodborne diseases. As a result, regulations in this field have increased. Thus, in 2001 new legislation was created in Catalonia, in 2002 in Andalusia, Aragon and Navarra; in 2003 in the Balearic Islands, Castile-Leon and Murcia; in 2004 in Galicia, and in 2005 in the Community of Madrid where Decree 35/2005 of March 10th established the practice of tattooing, micropigmentation, cutaneous perforation (piercing) and other body art. Other countries are also adopting new regulations that could be enacted in the European Union in the next few years.

Regarding piercing practices, these laws are based on the following points:

- Conditions and requirements that piercing establishments must follow: characteristics of the premises and its different areas, aseptic conditions, cleaning methods, sterilisation and disinfection control, handling of instruments, waste control, etc.
- Conditions and requirements under which piercers must work include levels of technical training and standards to follow during piercing practices, as well as the need to have Civil Responsibility Insurance. In addition, the organisations in charge of training courses must previously seek approval from the corresponding authorities. The state of the equipment and materials used is specified and consent of the piercees must be obtained with informed consent requiring that the different risks and complications derived from these practices be properly explained and accepted. In the case of minors then parental consent is required.
Conclusions

Oral piercing is becoming a common practice in our society, especially among young people. Due to its potential risks and sequelae it is important for oral health care professionals to become familiar with the characteristics of each type of piercing in order to act accordingly. Moreover there is a need for body piercing practices to be specifically regulated by the competent authorities in each country.

References


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