

Oral Tattoos: “Beauty Lies in the Eyes of the Beholder”

Pankaj Mishra¹ Manas Gupta² Kriti Shrivastava³ Neha Singh⁴ Pushpraj Singh⁵

¹Senior Lecturer, Department of Conservative & Endodontics, Rishiraj College of Dental Sciences & Research Centre, Bhopal, M.P., India.

²Senior Lecturer, Department of Oral Medicine and Radiology, Rishiraj College of Dental Sciences & Research Centre, Bhopal, M.P., India.

³Senior Lecturer, Department of Oral Medicine and Radiology, Rishiraj College of Dental Sciences & Research Centre, Bhopal, M.P., India.

⁴Senior Lecturer, Department of Oral Medicine and Radiology, Rishiraj College of Dental Sciences & Research Centre, Bhopal, M.P., India.

⁵Lecturer, Department of Oral Medicine and Radiology, Rishiraj College of Dental Sciences & Research Centre, Bhopal, M.P., India.

ABSTRACT

Background: Body piercing is a cultural practice or tradition in various civilizations dating back to antiquity. In recent years, body piercing has become increasingly fashionable for purely esthetic reasons and the practice cuts across all sectors of society. The emergence of oral tattoos especially among young adults is of concern to dental and medical professionals because of the risks and complications for oral, dental and general health. Intraoral piercings involve the tongue, while perioral piercings involve the lips, the cheeks and to a lesser extent the uvula and the frenum. Education is a primary method to intercept or prevent risky behavior of oral piercing and dental professionals have a major role in providing guidance about perioral /oral modification.

Keywords: Awareness, Body Piercing, Complications.

INTRODUCTION

In this fascinating world attention for beauty has increased leading to increased body piercing day by day^{1,2}. Body piercing is defined as the insertion of a needle to create an opening (fistula-like) into either cartilage or skin for decorative ornaments such as jewellery (or even plastic or wood plugs, beads, or pearls). Traditional piercings have been found in visible sites of the face and ears and semi visible sites like the navel and tongue³. The common body piercing sites include ear, nose, eyebrow, nipples, genitalia and the oral cavity. The lip is the most commonly pierced site followed by tongue piercing decorated with barbells, rings or studs made of gold, silver or stainless steel. Teeth jewellery is a new addition to the bridal makeup packages in this modern era by white or colored jewels^{1,2}.



Eventually, there is no external organ in the human body that has escaped piercing. In Netherlands implanting tiny jewellery

pieces in the mucous membrane of the eye known as “Jewel Eye” is in trend. Multiple surface piercings placed along flat areas of the chest wall or back using plastic hollow tubes with straight barbell style jewellery is known as “pocketing or corset piercings”³. Designing a beautiful smile for each individual’s needs and desires is unique artistry done by taking consideration of facial form, function and character with the help of latest gazettes, updated knowledge and skills⁴.

Historical Background

The ancient inhabitants of Easter Island believed tattooing their skin made it sacred and allowed them to speak directly to the Gods. Their tattoos included facial markings of bold lines and dots from one side of their foreheads to the other. The concept of decorating or enhancing the teeth is actually quite ancient. In both China and Japan, women at one point stained their teeth black as a part of their beauty regimens and in many cultures teeth were bordered in gold or replaced as a status symbol. The use of gold teeth was especially

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*Correspondence: Dr. Pankaj Mishra

Department of Conservative & Endodontics, Rishiraj College of Dental Sciences & Research Centre, Bhopal, M.P., India.

E-mail: drpankajmsr007@gmail.com

common amongst Latin Americans and the Caucasians⁵.

The earliest known representation of this piercing was in the figure of a dog created in Egypt around 1500 BC, when it was considered a symbol of royalty. For ancient Mayans, piercing was a symbol of spirituality, virility and courage⁶. For many years, body piercing at sites other than the earlobe have been a common practice in many cultures. The ancient Mayans pierced their tongues for spiritual purposes, while the Pharaohs of Egypt ceremoniously pierced their navels⁷.

Eskimos inserted a "labret" into the lower lip as a symbol of passage to adulthood in boys and as an act of purification in girls. The piercing of lips, cheek or tongue was also a traditional practice in Hindu, Chinese and American Indian cultures⁶. In some Chinese and Hindu cultures the lips, cheeks or tongue are ceremonially pierced by spears or other objects while the person is in a state of trance as part of a religious ceremony⁸.

Dental tattoos are not new, it was started in the West about 8-10 years ago when hippo singers and rappers started sporting them in their music videos and youngsters started mimicking them⁵. Historically, tooth jewellery is documented to have been popular among ancient people. According to an analysis of thousands of teeth examined at the Mexico's National Institute of Anthropology and History, ancient people of southern North America used semi-precious gems to beautify their teeth⁹.

Classification

Based on design four types of oral / perioral piercing jewellery are as follows⁶:

1. Labret: A bar with ball, disc or point at one end and flat closing disc at the other.
2. Barbell: A straight or curved bar with balls at each end.
3. Unclosed ring with a ball at one or both ends.
4. Two components of the stud held together by a magnetic force 10-fold greater than that of a conventional magnet.

Based on use dental tattoos are of two types⁵:

1) **Temporary tattoos:** Designed in the form of templates that are stuck on the teeth. Various kinds

of designs are available. Sticking a temporary tattoo takes just 15-20 minutes.

2) **Permanent tattoos:** They are drilled on the teeth. Once done you cannot get them removed. Inscribing permanent tattoos can take long perhaps upto an hour depending on the design chosen.

DISCUSSION

In this modern era body modifications are in fashion for making daring, personal statements and are done under peer pressure. This trend is seen most commonly amongst the college students to show their uniqueness in the society by undergoing tattooing, piercing, scarification, compression, implants and the permanent application of jewellery to show masochistic, sadistic, exhibitionistic or narcissistic behaviour^{10,11}. These various forms of body art are not new but it is amazing to see the extent to which they have become accepted by ever-expanding segments of today's society¹². Children are introduced to body art with face painting, stick-on jewellery, and commercial rub-on temporary tattoos. Face painting is usually done by adults as a form of entertainment at parties or street fairs¹⁰.

Oral and perioral piercing includes the insertion of jewellery into the tongue, lip, cheek, frenum, uvula or other part of the mouth and has long been practiced for religious, tribal, cultural, sexual or identity reasons⁶. Piercing of tongue is more common and safe on dorsoventral and the dorsolateral region. Lip piercing by labrette is done which is placed above the labiomental groove and centered underneath the vermillion border⁷. From the ancient times, tooth adornment was embellished with jade and turquoise, but current trends include the addition of gold, jewels or crowns that appear similar to stainless steel crown¹⁰.

Piercing objects are made of different materials, most commonly metals such as stainless steel or titanium. Recently, synthetic materials like Teflon and nylon or plastic have also been used¹³. Various types of tooth jewellery are available in the market including Skyce (Ivoclar Vivadent AG, Schaan, Liechtenstein) and Twinkles (Twindent AB, Uppsala, Sweden). They are preferably attached on upper incisors and canine teeth using composite

resin cements just for cosmetic purpose. Kim HJ et al suggested tooth jewellery as an alternative non-invasive method to mask the hypomineralized white spot lesions present on teeth⁹.

Complications

Body piercing has been around for many centuries and in almost every culture. It is an invasive procedure where serosanguinous fluid is released on puncturing leading to local infections and systemic illness such as blood-borne diseases³. Galle et al concluded in their study that high school students have more body art than their university peers and less knowledge of the health risks associated with tattoos and piercings because they buy these products at a younger age¹⁴. Various studies are reported in the literature leading to the potential complications of piercing performed by lay persons who do not have knowledge of anatomy, sanitation, or procedural precautions⁸. Leandro Chambrone et al reported a case of gingival recession and dental hypersensitivity due to lip stud which was positioned 1 cm below the medium portion of the inferior lip¹⁵. Dirk Ziebolz et al found that there was increased occurrence of enamel fissures, enamel cracks and lingual recessions due to tongue piercing in their study¹³. D Ziebolz et al noticed that oral hygiene was poor at the piercing site which act as a reservoir for moderate to very high periodonto-pathogenic bacteria in their study¹⁶. ChY Yu et al reported a case of infective endocarditis caused by pierced tongue as a source of infection in a surgically corrected congenital cyanotic heart disease person¹⁷.

As the prevalence of body art has increased, adverse health risks associated with these practices have been documented. The use of needles and other piercing instruments allow the mucocutaneous transmission of infectious diseases. These can range from local to systemic infections (e.g. osteomyelitis, toxic shock syndrome and bacteremia) as well as to life-threatening ones (e.g. septic arthritis, acute glomerulonephritis, endocarditis and hepatitis). In addition, the introduction of materials such as pigments and metals under the skin involve non-infective risks, such as allergic reactions. Later infectious complications brought on by lack of proper care of tattooed/pierced sites are also possible¹⁴.

With increasing levels of social acceptance, body art including tongue piercing has moved into mainstream culture and coincidentally with its gain in popularity, there have been reports of its attendant risks. Viral infections including hepatitis B, C and D, oral and dental trauma, and bleeding have been reported and are recognized complications of tongue piercing. Although no cases have been reported in the literature, it is possible that HIV transmission could occur through body piercing as well⁷. Various complications and possible sequelae of oral piercing are mentioned below based on the time^{1, 4, 7, 8, 18- 21}.

1. **Complications during piercing:** Hemorrhage, lingual nerve damage, swallowed or inhaled jewellery and trauma to surrounding oral mucosa and gingiva.
2. **Complications immediately following piercing:** Pain, swelling, local inflammation of the pierced site, localized infection, galvanism and hypersensitivity to metal, infection (bacterial, viral, fungal), communicable diseases like HIV, speech impediment and swallowing problems.
3. **Long term complications:** Hyperplastic or scar tissue formation, calculus formation on metal surfaces, tissue hyperplasia, dehiscence, cracked /fractured teeth, gingival recession, tooth abrasion, aspiration or ingestion of stud, foreign body incorporation into site of piercing and radiographic artefact.

Management of complications:

If there are complications, the jewellery or stud should be removed and pierced site be irrigated with 0.2% aqueous chlorhexidine. If there is frank infection, antibiotics may be indicated⁸. When the patient is not willing for the hole closure then to keep the piercing site patent by nylon line in lawn care equipment, such as a weed eater which is simple, inexpensive and suitable choice for a non-metal replacement. It is available in different diameters like 12-14 gauge for tongue piercings and 14 gauge for other oral piercings which is comparable in size to the jewellery normally used⁷.

Fate of perioral /oral piercing:

Increasing public recognition that body piercing is a mainstream phenomenon has

stimulated the awareness of public health officials for the need of regulation of body piercing. Four concerns become apparent when considering the future of body piercing. These are the regulation, the monitoring or tracking of piercing complications, the role self-expression plays in piercing and the calculation of risk in making decisions about piercings. Standardization of piercing practices is just beginning to surface as a public health mandate in select countries by forming regulations which focus mainly on providing guidelines for sanitation, equipment precautions and training of body piercers³. Education is a primary method to intercept or prevent risky behavior, and dental professionals have a major role in providing guidance about perioral/oral body modification¹⁰.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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