

Gingival Recessions Caused by Lip Piercing: Case Report

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A b s t r a c t

Fear of losing the teeth is common among patients presenting with gingival recession. This report describes a case in which unusual gingival recessions were caused by lip piercing. Periodontal treatment involved removal of the causative agent, hygiene instruction, scaling and root planing, and coverage of the root with a subepithelial connective tissue graft. The therapeutic measures applied in this case yielded satisfactory root coverage, an increase in the width of the keratinized gingiva, improvement in hygiene status and absence of dental hypersensitivity.

MeSH Key Words: *cosmetic techniques/adverse effects; gingival recession/etiology; lip/injuries*

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Fear of losing the teeth is common among patients presenting with gingival recession, especially when the patients realize that loss of periodontal structures is linked to deterioration in esthetic appearance and, in some cases, increase in dental hypersensitivity. These potential complications stimulate patients to seek proper treatment.

The main agents causing gingival recession that have been described in the literature are dental plaque,¹ destructive periodontal disease,^{2,3} mechanical trauma,^{4,5} areas with absence or a narrow zone (width) of attached gingiva,⁶ muscular inserts near the gingival margin,⁷ reduced thickness of the alveolar bone in the buccolingual side,^{8,9} root prominence,¹⁰ irregular tooth alignment in the dental arch,¹¹ margins of gingival restorations^{12,13} and viruses.¹⁴

Another agent that may produce mechanical trauma to oral tissues and that might be associated with gingival recessions is body piercing. This practice has been performed for centuries by some ethnic groups as part of traditional rituals,¹⁵ and has recently become more common among youths;¹⁶ various areas of the body, such as the face and parts of the mouth, may be subjected to insertion of metallic objects. This practice has been directly related to dental and gingival injuries on the lingual aspect of the anterior lower teeth in cases of tongue piercing¹⁷⁻¹⁹ and to buccal gingival recession in cases where the lip stud is located such that it can traumatize the gingiva^{19,20} (Table 1). Other

complications caused by lip piercing, such as lip inflammation, localized tissue overgrowth¹⁷ and metallic stud of a jewel that was embedded into the lip,²¹ have also been reported, as well as several cases of pathologic conditions caused by oral and perioral piercings, such as bacterial infections, edema and allergies (particularly to nickel).²²⁻²⁴

This article reports a case in which unusual gingival recessions were caused by lip piercing and describes the results of periodontal treatment.

Case Report

A 19-year-old female college student was referred to our private dental office with symptoms of dental hypersensitivity and gingival recession. The patient had undergone lip piercing 6 months earlier; the lip stud was positioned 1 cm below the medium portion of the inferior lip, where a metallic sphere could be seen. The gingival lesions had developed during the intervening 6 months. Clinical examination revealed an area of gingival recession on the buccal gingival walls of both lower central incisors; the exposed roots presented areas that were abraded by the piercing barbell, located in the lower lip mucosa (Fig. 1). This barbell seemed to be the main causative agent of the dental injuries. The defects were classified as Class II according to Miller's classification of marginal tissue recession,²⁵ in which the extension of the defects crossed the mucogingival junction without presenting any signs of interdental bone loss.

Table 1 Reports of gingival recession and dental abrasion associated with lip piercing

Reference	Age/sex	Months of wear	Gingival recession	Tooth abrasion
Er and others ²⁰	26/F	6	Mandibular central incisors (31, 41)	None
Campbell and others ¹⁹	18/M	24	Mandibular central incisor (41)	None
	19/F	24	Mandibular central incisors (31, 41)	None
This report	19/F	6	Mandibular central incisors (31,41)	Root surface (both incisors)

**Figure 1:** Lip-piercing barbell.**Figure 2:** Clinical aspect after the basic procedures.**Figure 3:** Diagnostic cast.**Figure 4:** Clinical aspect 5 months after treatment.

The first step in therapy was removal of the traumatic agent, after which the patient underwent scaling and root planing procedures. After these basic procedures, the patient's periodontal status was healthy and her oral hygiene acceptable (Fig. 2). A diagnostic cast was obtained to help in surgical planning (Fig. 3). Correction of the mucogingival defect was achieved through a subepithelial connective tissue graft, with tissue removed from the palate, in association with frenectomy to remove a high frenum insert close to the marginal gingiva.

After 5 months satisfactory root coverage through gingival wall restitution presented a more favourable esthetic aspect; the attached gingival zone had increased, which

favoured mechanical plaque control; and dental hypersensitivity was absent (Fig. 4).

Discussion

The development of gingival recessions subsequent to oral piercings has been reported in a small number of cases.^{18–20,26} Placement of the jewellery is usually performed by nonmedical professionals who are sometimes unaware of the anatomical characteristics of the oral and perioral area or the need for asepsis of any materials inserted into the tissues.

Campbell and others¹⁹ evaluated the effect of time (in years) and size of the stem and the barbell of tongue

piercings in relation to gingival trauma and tooth damage. They found that tongue piercing can be an important causative agent in the development of gingival recession of the lower anterior teeth and was also associated with dental trauma in molars.

The development of gingival recessions linked to lip piercing has been described in 2 case reports.^{19,20} The mandibular central incisors were affected after 6 months²⁰ and 2 years¹⁹ of usage, but no tooth abrasion was observed in these cases. In the case reported here, recessions and tooth abrasion developed after 6 months of use.

The patient described here was initially reluctant to remove the lip stud, although the oral trauma that had occurred and a fear of losing her teeth stimulated her to change her mind. However, in other cases the patient has refused to remove the traumatic agent.²⁰ Other complications, such as chipped or fractured teeth,^{19,23,27} interproximal bone loss,²⁶ tooth abrasion and galvanic currents produced by the jewellery, and lingual gingival trauma,^{18,19} have been observed in patients with tongue piercings. There are potential risks of postoperative complications, such as infection, edema and mechanical trauma, among patients who have not been instructed about proper maintenance and hygiene of oral piercings.^{22–24} If an oversized (long-shank) barbell is not used during the initial placement, the barbell can become stuck in the tongue and surgical removal may be required.²² Conversely, if a long-shank barbell used for initial placement is not replaced after 2 weeks, other adverse consequences, such as dental fractures, may occur.

In response to questioning, the patient indicated that she had not received enough information about caring for the piercing. This problem was also reported by Er and others.²⁰ During the recovery period after lip and tongue piercing, patients must wash their hands before touching or cleaning the pierced area; they should also check the ends of the barbell twice a day to ensure that they are tight against the mucosal surface (to avoid damage to the teeth or swallowing of the barbell), avoid public swimming pools and use an antibacterial mouthwash that does not contain alcohol for rinsing after meals.²⁴

It is likely that cases similar to the one described here will occur more frequently as the popularity of piercing grows among young people.¹⁶ In addition, many athletes now display various forms of intraoral piercings, which might lead to a greater risk of dental complications where use of a mouthguard is mandated.²⁸

The number of cases in which oral and dental complications are associated with lip piercings is smaller than those related to tongue piercings. However, dentists must be prepared to address their patients' individual needs with the aim of avoiding or intercepting the course of potential complications and removing the causative agent when

required.^{18,27} As piercing extends to an increasing number of intraoral areas, such complications and adverse consequences are also likely to increase.

In addition to the loss of attached gingiva, observations in this case included ulcerations at the free gingival margin, tooth abrasion, deposits of dental plaque related to the affected area and an increase in dental hypersensitivity. The therapeutic measures applied yielded satisfactory root coverage, an increase in the zone (width) of keratinized gingiva, improvement in hygiene status and absence of dental hypersensitivity. ♦

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