



July - September 2025
Vol. 5, no. 3 / pp. 106-108

Oral pathologies related to orthodontics: a case report

Patologías orales relacionadas con la ortodoncia: un caso clínico

Fernanda Torrealba Mancilla,* Catalina Troncoso Escudero,† Constanza Saavedra Negrete,§
Carlos Coderch Fonseca,|| Pedro Espíndola Montenegro,|| Emelie Lindgren Rubilar**

Keywords:

oral pathology,
orthodontics,
gingival lesion,
localized spongiotic
gingival hyperplasia,
interdisciplinary
diagnosis.

Palabras clave:

patología oral,
ortodoncia, lesión
gingival, hiperplasia
gingival espongiótica
localizada, diagnóstico
interdisciplinario.

ABSTRACT

Introduction: localized spongiotic gingival hyperplasia (LSGH) is a benign gingival condition of uncertain etiology that may arise during orthodontic treatment. Although often self-limiting, some cases require surgical intervention. **Case report:** a 14-year-old female undergoing orthodontic treatment presented with a persistent, asymptomatic gingival lesion adjacent to tooth 1.3. The lesion, initially observed when the tooth was in an ectopic vestibular position, persisted for several months and showed enlargement with central color changes. Clinical examination revealed a well-defined, sessile, erythematous lesion (8 × 3 mm). Excisional biopsy confirmed LSGH. Healing was uneventful, with no recurrence observed at follow-up. **Conclusion:** pathological mucosal lesions can develop during orthodontic care. Regular follow-up appointments are essential for early detection. Any lesion persisting beyond 15 days should be referred for oral pathology evaluation. Interdisciplinary collaboration between orthodontists and oral surgeons/pathologists ensures timely diagnosis and appropriate management.

RESUMEN

Introducción: la hiperplasia gingival espongiótica localizada (HGEL) es una afección gingival benigna de etiología incierta que puede surgir durante el tratamiento de ortodoncia. Aunque a menudo es autolimitada, algunos casos requieren intervención quirúrgica. **Informe del caso:** una mujer de 14 años sometida a tratamiento ortodóntico presentó una lesión gingival persistente y asintomática adyacente al diente 1.3. La lesión, observada inicialmente cuando el diente se encontraba en una posición vestibular ectópica, persistió durante varios meses y mostró un agrandamiento con cambios de color en el centro. El examen clínico reveló una lesión eritematosa bien definida y sésil (8 × 3 mm). La biopsia por escisión confirmó el LSGH. La cicatrización transcurrió sin incidentes y no se observó ninguna recurrencia en el seguimiento. **Conclusión:** durante el tratamiento ortodóntico pueden desarrollarse lesiones patológicas en la mucosa. Las citas de seguimiento periódicas son esenciales para la detección precoz. Cualquier lesión que persista más de 15 días debe ser remitida para su evaluación por un patólogo oral. La colaboración interdisciplinaria entre ortodoncistas y cirujanos orales/patólogos garantiza un diagnóstico oportuno y un tratamiento adecuado.

Abbreviation:

LSGH = localized spongiotic gingival hyperplasia.

INTRODUCTION

Localized spongiotic gingival hyperplasia (LSGH) is a benign lesion characterized by erythematous, papillary gingival overgrowth. Although it was originally described in adolescents, more recent reports indicate that it occurs in a wider age range.¹ Given its uncertain etiology, potential

for spontaneous regression, and poor response to conventional hygiene measures, recognition and histopathological confirmation are crucial. For orthodontic patients, routine control appointments provide an important opportunity for early detection and timely referral.

This report describes a case of LSGH in a young patient undergoing orthodontic treatment and highlights the importance of collaboration between orthodontists and oral pathologists/surgeons.

How to cite: Torrealba MF, Troncoso EC, Saavedra NC, Coderch FC, Espíndola MP, Lindgren RE. Oral pathologies related to orthodontics: a case report. Lat Am J Oral Maxillofac Surg. 2025; 5 (3): 106-108. <https://dx.doi.org/10.35366/121714>

Received: 05/05/2025

Accepted: 24/09/2025

doi: 10.35366/121714

* Oral Pathology, Hospital San Camilo, San Felipe, Chile.

† Orthodontics, Pontifical Catholic University of Chile, Chile.

§ DDS, Universidad del Desarrollo, Santiago, Chile.

¶ DDS, CESFAM Cordillera Andina, Los Andes, Chile.

|| DDS, Universidad de Chile, Santiago, Chile.

** DDS, Universidad de Valparaíso, Valparaíso, Chile.



CASE REPORT

A 14-year-old female was referred by her orthodontist due to a persistent gingival lesion adjacent to the upper right canine (tooth 1.3) (*Figures 1-4*). The lesion was first noted when the tooth was ectopically positioned at the start of orthodontic treatment. Despite reinforcement of oral hygiene, the lesion persisted and progressively enlarged.

The patient's medical history included multiple allergies and cardiological evaluation for prolonged QTc interval. Clinical examination revealed a sessile, erythematous, asymptomatic lesion on the free vestibular gingiva of tooth 1.3, measuring approximately 8 × 3 mm and had well-defined margins with no bleeding.

An excisional biopsy was performed under outpatient conditions. Histopathological analysis confirmed localized spongiotic gingival hyperplasia, showing stratified squamous epithelium with marked spongiosis, acanthosis, and mild inflammatory infiltrate (*Figures 5 and 6*).

At one-week follow-up, healing was complete without complications. No recurrence was observed.

DISCUSSION

LSGH is an uncommon gingival lesion, clinically presenting as erythematous, nontender gingival overgrowth, often mistaken for reactive or inflammatory lesions. Its immunohistochemical profile, particularly CK19 expression, suggests that it originates from the junctional epithelium.^{2,3}

Management varies from observation to excision. Although spontaneous regression has been documented,⁴ surgical removal ensures definitive diagnosis and rapid resolution. Recurrence is rare, with both excision and cryotherapy considered effective approaches.^{5,6}



Figure 1: Initial clinical presentation of lesion in January 2023 (vestibular gingiva, tooth 1.3).

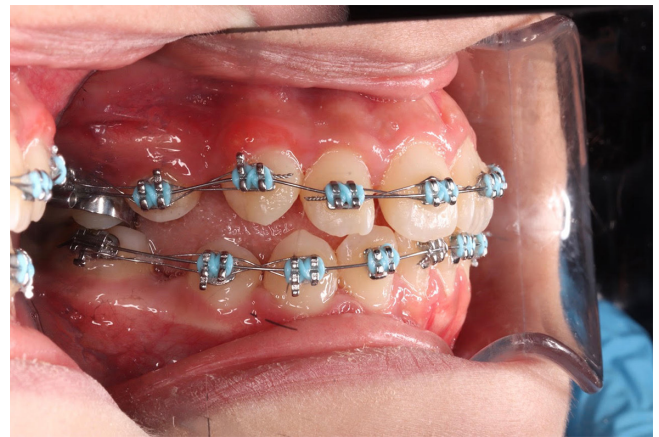


Figure 2: Clinical image, September 2023, showing persistent lesion and vestibular malposition of tooth 1.3.

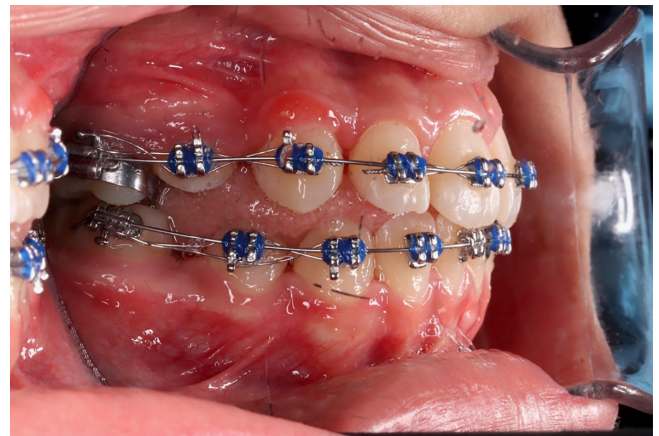


Figure 3: Clinical image, October 2023, with orthodontic brackets in place and lesion persistence.

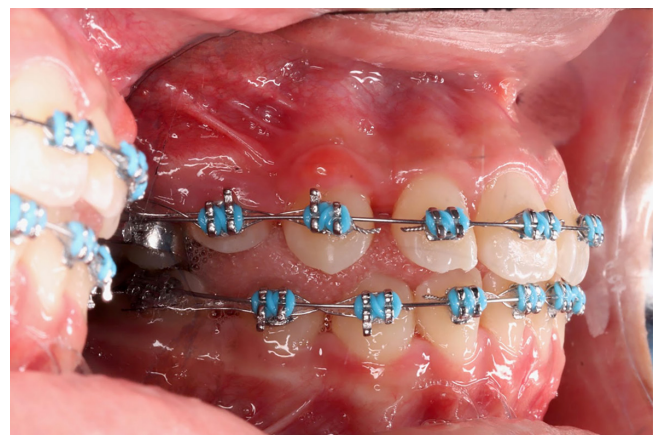


Figure 4: November 2023, erythematous enlargement of the lesion adjacent to tooth 1.3.

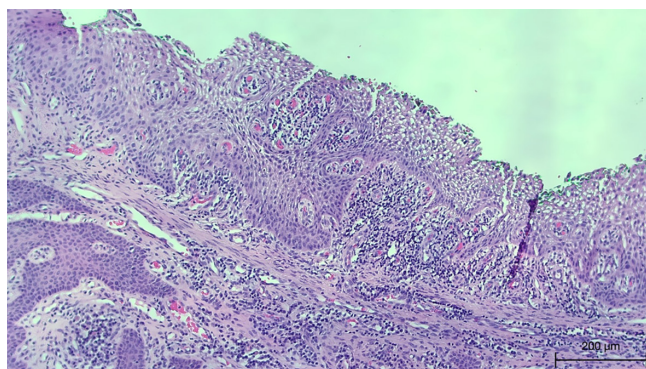


Figure 5: Histopathological section (H&E, 200 µm) showing spongiosis and acanthosis in stratified squamous epithelium.

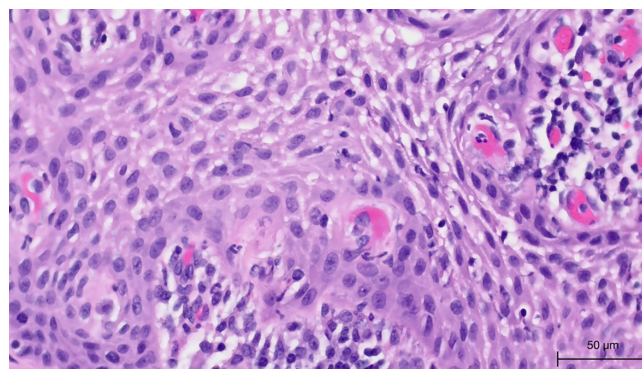


Figure 6: High magnification (H&E, 50 µm) showing spongiosis with separation of epithelial cells in the spinous layer.

In orthodontic patients, routine checkups represent an invaluable opportunity for mucosal surveillance. Persistent lesions require biopsy to rule out other pathologies, including reactive gingival growths and early neoplastic changes. Oral and maxillofacial surgeons play a central role in the surgical management and histopathological assessment of these cases.

This case highlights the importance of interdisciplinary collaboration. The orthodontist's vigilance resulted in a timely referral, diagnosis, and treatment, which prevented unnecessary complications.

CONCLUSIONS

1. Gingival lesions such as LSGH can appear during orthodontic treatment.
2. Lesions persisting beyond 15 days should be referred for oral pathology evaluation.
3. Surgical excision remains a safe and effective option when spontaneous regression does not occur.
4. Collaboration between orthodontists and oral/maxillofacial specialists is key to optimal patient outcomes.

ACKNOWLEDGMENTS

The authors would like to thank Dr. Catalina Troncoso Escudero for her role in case detection and referral.

REFERENCES

1. Vargo RJ, Bilodeau EA. Reappraising localized juvenile spongiotic gingival hyperplasia. *J Am Dent Assoc.* 2019; 150 (2): 147-153. e2.
2. Silveira HA, Toral-Rizo VH, Lara-Carrillo E, et al. Spongiotic hyperplasia of the oral mucosa: case series and immunohistochemical analysis. *Oral Maxillofac Surg.* 2022; 26 (2): 333-337.
3. Theofilou VI, Pettas E, Georgaki M, et al. Localized juvenile spongiotic gingival hyperplasia: microscopic variations and proposed change to nomenclature. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2021; 131 (3): 329-338.
4. Decani S, Lodi G, Sardella A, Varoni EM. Localised juvenile spongiotic gingival hyperplasia: a case of spontaneous resolution and a literature review. *Eur J Paediatr Dent.* 2021; 22 (2): 159-162.
5. Mawardi HH. Management of localized juvenile spongiotic gingival hyperplasia: a systematic review. *J Dermatol Dermatol Surg.* 2021; 25 (1): 1-5.
6. Nogueira VKC, Fernandes D, Navarro CM, et al. Cryotherapy for localized juvenile spongiotic gingival hyperplasia: preliminary findings on two cases. *Int J Paediatr Dent.* 2017; 27 (3): 231-235.

Correspondence:

Fernanda Marcela Torrealba Mancilla

Los Crisantemos No. 2206,

217000, San Felipe, Chile

Phone: (+56) 92938-5131

E-mail: dratorrealbamancilla@gmail.com