

## CASE REPORT

# Pigmented Lesion of the Oral Cavity With Eight Years Follow-up

GILBERTO TORRES FERNÁNDEZ, DMD

A 27 year old white female with a pigmented lesion on the anterior portion of the mandibular gingival is described. A prophylactic excisional biopsy was performed in conjunction with a gingival graft. A gingival graft was performed to accelerate the healing process and reduce post operative discomfort. An intradermal nevus was diagnosed. The number of

documented oral nevi in the literature now exceeds 200 and approximately half of them are histologically of the intradermal type. If early detection of thin oral melanomas is to be achieved, all pigmented oral cavity lesions should be viewed with suspicion. *Key words:* Oral pigmented lesion, Oral melanoma, Gingival graft and healing process, Oral intradermal nevus, Oral nevi.

The dramatic increase in survival rates of patients with cutaneous melanoma in the past 20 years suggests that melanomas are being recognized and diagnosed early in the course of the disease. (1) In contrast, the prognosis for patients with oral melanoma is grave despite aggressive therapy and has not significantly changed since Chaudhry's review (2) of 105 cases in 1958. Delayed detection by physicians, dentists and patients can well explain the poor prognosis they have.

A valid correlation exists between melanomas and preexisting pigmentation. Asymptomatic oral pigmentation in the site of oral melanoma was noted before diagnosis by approximately one third of the patients in each of the five large reviews (2-7). The appearance of pigmentation in the oral cavity preceding invasive malignant melanoma underscores the necessity of routine oral examinations and prompt diagnosis. The excision of all suspected oral nevi is warranted because they can not be clinically differentiated from other pigmented lesions, including oral melanoma (8). Oral melanoma is a neoplasm with poor prognosis; its premature diagnosis is of foremost importance (9). Melanoma of the mouth is rare, most commonly occurring on the upper jaw of patients older than 50 years. Because of frequent delay in diagnosis, the tumors are often diagnosed after they are

deeper than the average cutaneous melanoma, hence the prognosis tends to be poor (10).

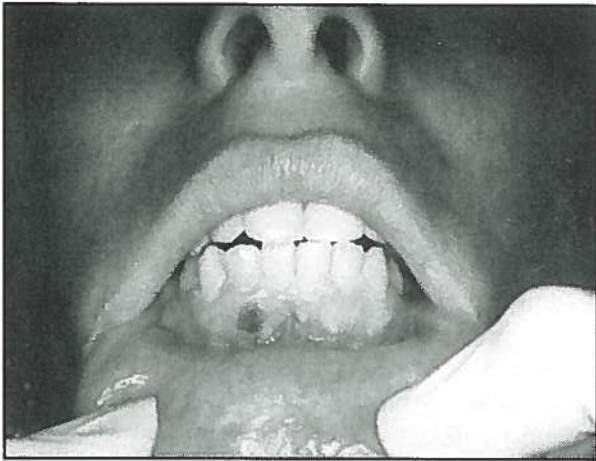
Pigmented cellular nevi of the oral mucosa are less frequent than those of the skin and are rarely found in very young or very old people (11). Pigmented lesions in brown, blue black, or variations of these colors are relatively rare in the oral cavity but very common in the skin and can range from absolutely benign to highly malignant (12). Intradermal nevus is the most frequent pigmented nevi of the oral mucosa and categorized as a benign tumor of the melanogenic system (13,14), but clinically it is sometimes difficult to diagnose. We report the case of an intradermal nevus suspected to be malignant melanoma which was followed for eight years.

## Case Report

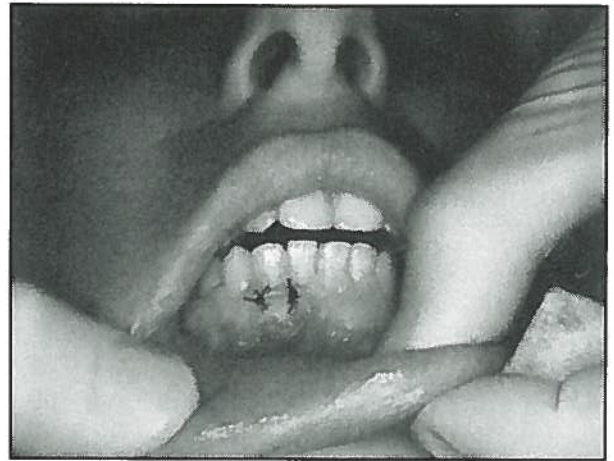
Oral examination of a 27 year-old white female patient disclosed an oral pigmented lesion on the anterior portion of the mandibular gingiva (Fig. 1). The patient reported that she noticed the pigmented lesion four years before. The lesion had increased in size, the superficial surface of the lesion was raised, and the patient was concerned. The entire mass was excised for biopsy and the extent of the excised lesions was .9cm. x .7cm. with a central, ill-defined hyperpigmented area. The biopsy was performed by a periodontist who removed the lesion completely, leaving only the periosteal membrane (Fig. 2). Due to the extent of the excised lesion, a gingival graft was placed over the exposed periosteal membrane (Fig. 3). Complete healing of the excised area was observed one week after surgery (Fig. 4). Figure 5 shows the patient 4 weeks after

From the Surgical Science Department, University of Puerto Rico School of Dentistry, San Juan, PR.

Address for correspondence: Gilberto Torres-Fernández, DMD, 430 San Claudio St. Urb. Sagrado Corazón, Rio Piedras, PR. 00926 Tel. (787) 761-0888, (787) 760-2195; Fax: (787) 760-2195 E-mail: gtorres@coqui.net



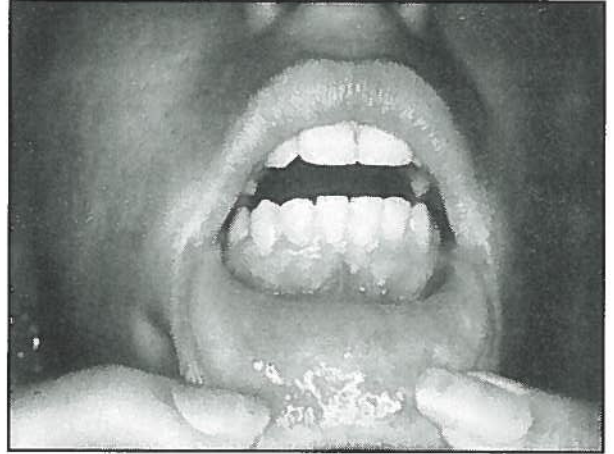
**Figure 1.** Twenty seven years old female patient with an oral pigmented lesion on the anterior portion of the mandibular gingiva.



**Figure 3.** The gingival graft over the exposed periosteal membrane.



**Figure 2.** The lesion has been completely removed, leaving only the periosteal membrane.



**Figure 4.** Complete healing of the excised area one week after surgery.

surgery and Fig.6 shows the patient 8 years later and no residual lesion was present.

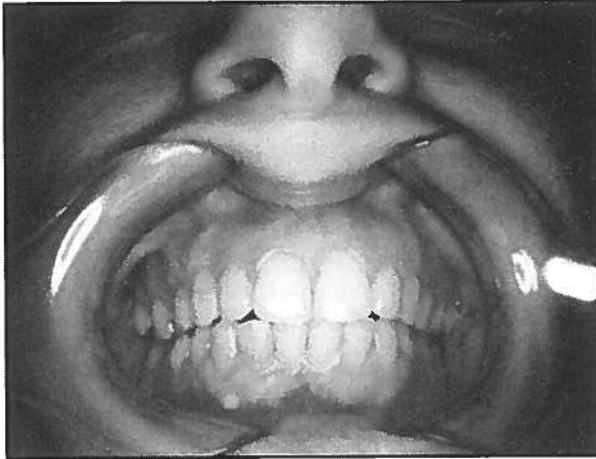
The specimen was conventionally processed for light microscopy, and sections were stained with hematoxylin-eosin. The pathological diagnosis of the specimen was intradermal (intramucosal) nevus.

### Discussion and Conclusions

Oral nevi poses the greatest diagnostic challenge (16) among all causes of intraoral pigmentation and the number of documented oral nevi reported in the medical literature exceeds 200. Buchner and Hansen (15) reviewed 155 cases of oral nevi and seventy documented cases have been added to the previously reported cases. In their review, clinical presentation, site, configuration,



**Figure 5.** Excised area 4 weeks after surgery.



**Figure 6.** Eight years post excision of intradermal nevi. No residual lesion was present.

size, duration of the nevi, as well as the patient's sex and race were analyzed. They reported that 105 of 191 cases (55%) were of the intradermal (intramucosal) type, followed by the common blue nevus (32%), compound nevi (6%), Junctional nevi (5%), and combined nevi (2%). Weathers and Waldron (13) reported that the intradermal (intramucosal) type comprised (58%) of oral nevi.

Buchner and Hansen (15) reported that intradermal (intramucosal) nevi were located: in the buccal mucosa (30%), hard palate (24%), gingiva (18%), vermillion border (15%), retromolar pad (7%), and labial mucosa (6%). Of the 93 intradermal (intramucosal) nevi analyzed, 78% were pigmented and the remainder non-pigmented. Non-pigmented nevi were especially common in the intradermal (intramucosal) group and close to 80% of the intradermal (intramucosal) nevi were raised. In the case we report the superficial surface of the lesion was raised, a feature that aids in differentiating from physiological pigmentation, amalgam tattoos, and oral-labial melanotic macule (mucosal lentigo simplex) (15). The mucosal lentigo is a common pigmented lesion of the oral mucosa which must be differentiated from other melanotic lesions, especially malignant melanoma.

Clinically, more than 80% of intraoral nevi are less than 1 cm in diameter and almost half of them are between 0.1 and 0.3cm. (17), our case measured .9cm x .7cm. Due to the extent of the excised lesion, a gingival graft was placed over the exposed periosteal membrane to accelerate the healing process of the excised area and for the patient's postoperative comfort.

Moore and Martin (18) reported that six of their 11 patient with oral melanoma had previously existing pigmentation from 1 to 5 years. Melanosis may exist many years before the definite diagnosis of melanoma is made. (7). The potential of oral nevi to undergo malignant

transformation is still uncertain, so in order to obtain an accurate and correct diagnosis, microscopic examination should be performed (11,19,20,21). Trodahl and Sprague have suggested several reasons for the use of prophylactic excisional biopsy of any focal pigmented lesion of the oral mucosa (19). These are: 1) the difficulty in clinical differentiation between focal melanotic lesions and a number of other pigmentations. 2) the relatively high ratio of malignant to benign occurrence of melanocytic lesions. 3) the significant number of malignant melanomas that appear clinically innocent. 4) the significant number of melanomas that are preceded by asymptomatic pigmentations.

All pigmented lesions of the oral cavity should be viewed with suspicion. Those that possess clinical features suggestive of melanoma or that lack an obvious cause must be subjected to biopsy. In cases where the oral pigmented lesion is large, an incisional biopsy can be performed as a more conservative technique. Incisional biopsy is less traumatic and if and the biopsy is negative for melanoma, the patient will have a short postoperative period. The disadvantage of this technique is that if the biopsy confirms the diagnosis of melanoma, the patient has to be exposed to another surgical procedure, increasing the possibility of a metastatic lesion. In order to improve the prognosis of patients with oral melanoma, early detection and prompt surgical attention to these aggressive tumors must be achieved.

## Resumen

Se describe el caso de una mujer blanca de 27 años de edad la cual presenta una lesión pigmentada en la gingiva bucal anterior mandibular. Se le realiza profilácticamente una biopsia excisional en unión con un trasplante de encía adherida y se diagnosticó lunar epidermal. Se decidió realizar el trasplante de encía adherida para el beneficio post operatorio del paciente, ya que acelera el proceso de sanado y disminuye las molestias. El total de los lunares orales reportados en la literatura excede 200 casos, de los cuales aproximadamente la mitad son histológicamente del tipo intradermal. Si se quiere hacer un diagnóstico temprano de melanoma oral en etapa incipiente, todas las lesiones pigmentadas de la cavidad oral deben ser vistas como sospechosas.

## References

1. Smith T. The Queensland melanoma project: an exercise in health education. *Br Med J* 1979; 1: 253-4.
2. Chaundry AP, Hampel A, Gorlin RJ. Primary malignant melanoma of oral cavity: a review of 105 cases. *Cancer* 1958; 11:923-928.

3. Baxter H. Review of malignant melanoma of the mouth - report of a case. *Am J Surg* 1941;51:379-386.
  4. Rapini RP, Golite LE, Greer RO, et al. Primary malignant melanoma of the oral cavity: a review of 177 cases. *Cancer* 1985;55:1543-1551.
  5. Liversedge RL. Oral malignant melanoma. *Br J Oral Surg* 1975; 13:40-55.
  6. Takagi M, Ishikawag G, Mori W. Primary malignant melanoma of the oral cavity in Japan with special reference to mucosal melanosis. *Cancer* 1974; 34:358-370.
  7. Manganaro AM, Hammond HL, Dalton MJ, Williams TP. Oral melanoma: case reports and review of the literature. *Oral Surg, Oral Med, Oral Pathol, Oral Radiol, Endod.* 1995;80:670-676.
  8. Biesbrock AR, Aguirre A. Multiple focal pigmented lesions in the maxillary tuberosity and hard palate: a unique display of intraoral junctional nevi. *J Periodontol* 1992;63:718-721.
  9. Seoane-Leston JM, Vázquez-García J, Aguado-Santos A, Varela-Centelles PI, Romero MA. Dark oral lesion: differential diagnosis with oral melanoma. *Cutis.* 1998;61:279-282.
  10. Rapini RP. Oral melanoma: diagnosis and treatment. *Semin Cutan Med* 1997;16:320-322.
  11. Grossman JR, Miller G. Intrajunctional nevus. *J Oral Surg.* 1975;33:275.
  12. Moghadam BK, Gier RE. Melanin pigmentation disorders of the skin and oral mucosa. *Compendium.* 1991;12:16-20.
  13. Weathers DR, Waldron CA. Intra oral cellular nevi: review of the literature and report of five cases. *J Oral Path* 1965;20:475.
  14. Ten Seldam REJ, Helwing EB, Sobin LH, Torloni H. *Histological typing of skin tumours*, 1st Ed Geneva: World Health Organization. 1974.p.66-72.
  15. Buchner A, Hansen LS. Pigmented nevi of the oral mucosa: a clinicopathologic study of 36 new cases and review of 155 cases from the literature. Part II Analysis of 191 cases. *Oral Surg* 1987; 63:676-682.
  16. King O, Blankenship, King W. Frequency of pigmented nevi in the oral cavity (Abstract). *Oral Surg* 1967;23:82-90.
  17. Buchner A, Hansen LS. Pigmented nevi of the oral mucosa: a clinicopathologic study of 36 new cases and review of 155 cases from the literature. Part I A clinicopathologic study of 36 new cases. *Oral Surg* 1987;63:566-572.
  18. Moore ES, Martin H. Melanoma of the upper respiratory tract and oral cavity. *Cancer* 1955;8:1167.
  19. Trodahl JN, Sprague WG. Benign and malignant melanocytic lesions of the oral mucosa: an analysis of 135 cases. *Cancer* 1970;25:822.
  20. Shafer WG, Hine MK, Levy BM. *A textbook of oral pathology*, 3rd. Ed Philadelphia, London and Toronto: WB Saunders; 1983.p. 84-87 .
  21. Devildos LR, Langlois CC. Intramucosal cellular nevi. *Oral Surg* 1981;52:165.
-