

Enlarging Lobulated Nodule on Cheek

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Online Case: www.dentalcare.com/en-us/professional-education/case-challenges/case-challenge-061



The following Case Challenge is provided in conjunction with the UT Health San Antonio School of Dentistry faculty.

A 55-year-old male presents stating, "I have a bump in my mouth that is getting bigger."

After you have finished reviewing the available diagnostic information, make the diagnosis.

Diagnostic Information

History of Present Illness

Raul is 55-year-old Hispanic male who reports with a chief complaint of, "I have a bump in my mouth that is getting bigger." He first noticed it about 2 months prior, but is unable to recall any antecedent trauma. He does not relate any pain, but is annoyed by its presence and is starting to worry because it is enlarging.

Medical History

- Adverse drug effects: penicillin (upset stomach); Lisinopril (angioedema)
- Medications: desvenlafaxine, glyburide, simvastatin, Dyazide, Tylenol
- Pertinent medical history: depression; diabetes mellitus type 2; hypercholesterolemia; hypertension; osteoarthritis
- Pertinent family history: paternal: diabetes type 2, myocardial infarction age 58 (fatal); maternal: healthy; sisters have diabetes mellitus type 2
- Social history: denies tobacco; 2-3 beers / week; denies recreational drug exposure

Clinical Findings

- BP: 126/ 76
- Pulse: 76
- Extraoral examination reveals a normal TMJ, no muscle tenderness, and no lymphadenopathy
- Intraoral examination reveals a well-defined (~ 2.5 cm x 1.5 cm) lobulated, pedunculated, smooth surfaced, soft tissue mass arising from the posterior right buccal mucosa. There is evidence of apparent surface irritation but there is no induration. An excisional biopsy is performed and the tissue submitted for histopathologic examination.

Histopathologic Findings

The biopsy shows an ulcerated inflamed exophytic nodular lobulated proliferation of granulation tissue. The inflammatory infiltrate consists of neutrophils, eosinophils, lymphocytes, plasma cells and histiocytes. The stroma is edematous and contains numerous ectatic congested thin-walled vascular channels lined by plump reactive endothelial cells. The adjacent surface epithelium is hyperplasia and hyperparakeratotic.



Figure 1. Lobulated tissue mass in the posterior right buccal mucosa.



Figure 2. Manipulation of the buccal mucosa mass to demonstrate a pedunculated attachment.

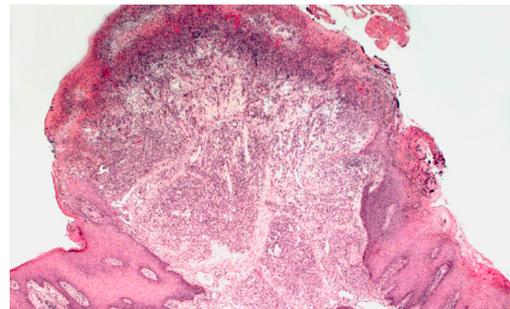


Figure 3. Low-power histologic image showing a nodular ulcerated mass of inflamed granulation tissue with adjacent hyperplastic surface epithelium.

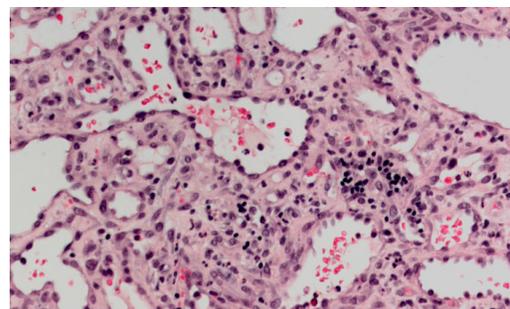


Figure 4. High-power histologic image showing acute and chronic inflammation with stromal edema and numerous interspersed ectatic vascular channels lined by plump reactive endothelial cells.

Select Diagnosis

Can you make the diagnosis

A 55-year-old male presents stating, "I have a bump in my mouth that is getting bigger."



Select the Correct Diagnosis

- A. Rhabdomyosarcoma
- B. Pyogenic granuloma
- C. Irritation fibroma
- D. Lipoma

Rhabdomyosarcoma

Choice A. Sorry, this is not the correct diagnosis.

Rhabdomyosarcoma (RMS) is a rare malignant tumor of rhabdomyoblasts. The head and neck area is the most common site of occurrence (35%).^{1,2} These tumors predominantly affect children and account for 50% of childhood sarcomas. There is a slight male predilection. Commonly affected intraoral sites include the palate and the tongue.² The typical presentation is that of a painless, rapidly expanding infiltrative mass with a soft, gummy-like consistency.² However, some lesions present as a botryoid or lobulated mass resembling a cluster of grapes.^{1,2} Histopathologic features are characterized by a variable presentation of small round blue cells, presenting with sheets of small cells with large prominent nuclei.³ Three histopathologic variants are recognized: embryonal, alveolar, and pleomorphic.^{2,3} Medical management consists of complete excision and multiagent chemotherapy (vincristine, actinomycin D, and cyclophosphamide). Radiotherapy may be used when excision is deemed incomplete.^{1,2} The histopathologic features in this case do not support this diagnosis.

Please re-evaluate the information about this case.

Pyogenic granuloma

Choice B. Congratulations! You are correct.

A pyogenic granuloma (PG) is a rapidly growing and exuberant reactive tissue response to local irritation, trauma, or increased hormonal levels (e.g. pregnancy tumor).^{1,4} It may occur at any age and a female sex predilection is noted. Common precipitating factors include irritation from a popcorn kernel or tip of a toothpick, trauma from an overhanging or over-contoured restoration, broken prostheses, or plaque and calculus accumulation.⁵ Seventy-five percent of these lesions arise from the gingival mucosa, but any oral mucosal site may be affected. Histopathologic findings include a highly vascularized proliferation that resembles granulation tissue, with numerous endothelial channels and red cell engorgement.¹ Untreated PG's may gradually undergo fibrous maturation. Simple excision is the treatment of choice. When a PG forms adjacent to teeth, surgical excision followed by scaling and root planning of the adjacent teeth is necessary. The prognosis is good.

Irritation fibroma

Choice C. Sorry, this is not the correct diagnosis.

The irritation fibroma is a common benign exophytic reactive oral lesion that develops in response to tissue injury.^{1,6} Fibromas may occur at any age but are more common in adults and a male sex predilection is noted. Although any oral mucosal site may be affected, most occur on the buccal mucosa, labial mucosa, or lateral tongue since these sites are easily traumatized. A fibroma typically presents as an asymptomatic well defined, smoothed surfaced, mucosal colored, firm nodule less than 1.5 cm in size. Continued traumatization may result in surface ulceration and pain.⁴ Histopathologic examination reveals a nodular mass of mature fibrous connective tissue with intact overlying surface stratified squamous epithelium. If surface ulceration is present, the nodular mass will be covered with fibrin interspersed with neutrophils. An acute and chronic inflammatory infiltrate may be noted in the underlying connective tissue. A fibroma should be surgically excised and recurrence is uncommon.¹ The histopathologic findings in this case do not support this diagnosis.

Please re-evaluate the information about this case.

Lipoma

Choice D. Sorry, this is not the correct diagnosis.

A lipoma is the most common mesenchymal tumor, but only rarely occurs in the oral cavity.¹ An estimated 30% to 45% of oral lipomas occur on the buccal mucosa.⁷ A lipoma typically presents as a slow growing, soft, asymptomatic mass, and is usually identified between the ages of 40-60 years.⁸ The characteristic histopathologic feature is a well circumscribed accumulation of normal appearing mature fat cells.¹ Based on morphology, oral lipomas may be further classified as: 1) classic lipoma, 2) fibrolipoma, 3) spindle cell lipoma, 4) angiolipoma, 5) salivary gland lipoma, 6) pleomorphic lipoma, or 7) atypical lipoma.⁷ Most lipomas are managed with conservative excision and recurrence is uncommon, except for intramuscular lipomas which may require a more aggressive surgical excision.⁷ The histopathologic findings in this case do not support this diagnosis.

Please re-evaluate the information about this case.

References

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