

CONGRESS PROCEEDING

Reactive Hyperplasias in the Oral Mucosa: Case Series

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Abstract

Purpose: Reactive hyperplasias are often encountered tumor-like exophytic lesions of the oral mucosa, but they are not a neoplasm. Local factors such as dental calculus, food residue stuck between teeth, incompatible prosthetic restoration, and systemic factors such as hormonal changes play a role in the etiology of these hyperplasia. The aim of this presentation is to evaluate the possible etiological factors, clinical, and radiological findings of 10 reactive hyperplasia cases seen in different regions of the mouth.

Case report: Ten patients (seven females and three males) with a mean age 40.2 applied to our clinic with complaints of swelling in the mouth. In the medical anamnesis, it was learned that three (30%) patients had recently given birth and the related swelling started to occur in the second trimester of pregnancy, three (30%) patients had different diseases such as heart, hypertension, diabetes, and cholesterol, and were under regular medication for systemic disease. There was no finding on extraoral examination. In intraoral examination, mass lesions which red and/or pink, lobular/nodular, painless, pedunculated and/or sessile, and smooth and/or ulcerated was seen on the maxilla of six patients, mandible of three patients, and lower lip mucosa of one patient. Poor oral hygiene in seven (70%) patients, prosthetic restoration in the lesion-related area in two (20%) patients, and attrition incisal tooth surface and diastema in one (10%) patient were found. Radiographic examination revealed that minimal resorption on the alveolar crest in the lesion-related area of only three (30%) patients was seen. All lesions were histopathologically examined after surgical excision. According to the clinic, radiographic and histopathological features, diagnosis of the lesions was made as pyogenic granuloma (four cases; 40%), peripheral ossifying fibroma (three cases; 30%), traumatic fibroma (two cases; 20%) and peripheral giant cell granuloma (one case; 10%).

Conclusion: It was concluded that the lesions examined in this case series were mostly caused by local factors. The clinical findings observed in the patients were red nodular mass, painless, soft, and smooth-surfaced. In the radiographic examination, no finding was detected in most of the lesions.

Key words: Reactive hyperplasia; Pyogenic granuloma; Peripheral ossifying fibroma; Traumatic fibroma; Peripheral giant cell granuloma

Introduction

Reactive hyperplasia lesions (RHL) are tumor-like, exophytic, and originated from fibrous connective tissue, but they are not neoplasm.¹ The lesions generally occur in the oral mucosa as response to any injuries.² Among the etiological factors of RHL are local factors such as dental calculus, food residue stuck between teeth, incompatible prosthetic restoration, and systemic factors such as hormonal changes.³ RHL can be clinically painless, sessile, or pedunculated masses with ulcerated or smooth surfaces. The colour of the lesions may vary from pale pink to dense red or purple. During palpation, the consistency of the lesion may be soft, rubbery, or hard, depending on the amount of collagen it contains. In addition, some lesions can easily bleed with mild irritation, depending on the amount of vascularity it contains. The localization frequency of RHL is usually gingiva, tongue, buccal mucosa, and floor of the mouth.⁴

In literature, different classifications are accepted for RHL. Buchner et al. have classified RHL as focal fibrous hyperplasia, pyogenic granuloma, peripheral ossifying fibroma, and peripheral giant-cell granuloma.⁵ Zarei et al. have classified RHL as traumatic fibroma, pyogenic granuloma, peripheral ossifying fibroma, hyperplasia caused by dentures, and peripheral giant-cell granuloma.³ The aim of this presentation is to evaluate the possible etiological factors, clinical, and radiological findings of ten reactive hyperplasia cases seen in different localizations of the mouth.

Case Reports

Ten patients (seven females and three males) applied to the Department of Maxillofacial Radiology, Faculty of Dentistry, Gazi University with the complaining of swelling in the mouth are presented

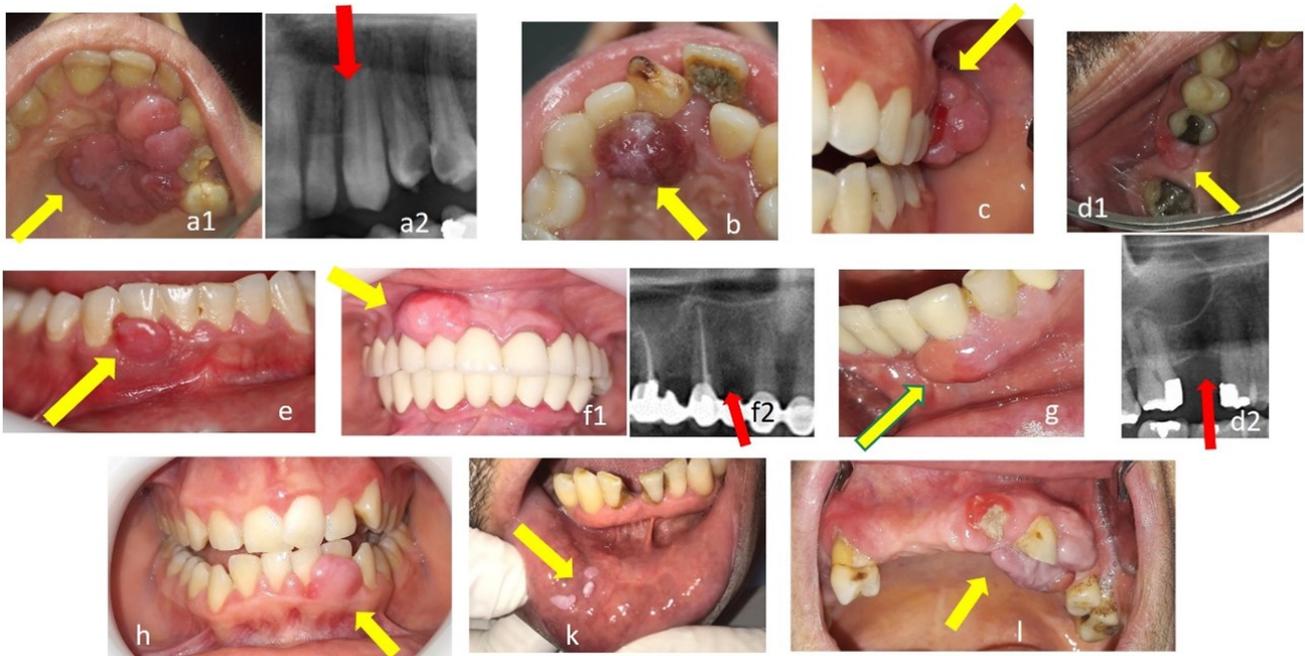


Figure 1. Intraoral and radiography images of reactive hyperplasia lesions (a1 and a2: Case 1, b: Case 2, c: Case 3, d1 and d2: Case 4, e: Case 5, f1 and f2: Case 6, g: Case 7, h: Case 8, k: Case 9, l: Case 10)

Table 1. A mean age of the patients was 40.2 years old (minimum: 21, maximum: 70). In medical anamnesis, it was learned that Case 1, 2, and 3 having a childbirth one month ago and swelling started at the second trimester of pregnancy. It was learned that Case 5 smokes four/five cigarettes a day. Case 6, 7 and 9 were using ‘antihypertensive medication’, ‘antihypertensive, antidiabetic, and anticoagulant medications’, and ‘antidiabetic, and anticoagulant medications’, respectively. Medical histories of other patients were unremarkable. There are no findings all patients during extraoral examination. Intraoral examination revealed pinkish red lobular mass, in Case 1, 3 and 10 and pink nodular mass, in other cases Figure 1. Only one of the lesions was pedunculated (Case 1) and the others were sessile. Only one of the lesions was ulcerate-surfaced (Case 2) and the others were smooth-surfaced. All of the lesions were soft and painless. The lesions in Case 1, 2, 3, 4, 6 and 10 were on the maxilla, the lesions in Case 5, 7 and 8 were on the mandible, and the lesion in Case 9 was on the lower lip. Poor oral hygiene, calculus, dental plaque, and gingivitis were observed in Case 1, 2, 3, 4, 5, 8, and 10. Prosthetic restoration was not compatible, and gingiva had edema, in Case 6 and 7. Attrition at incisal tooth surface and diastema were seen in Case 9. Radiographically, minimal resorption was observed on alveolar crest in the lesion region in Case 1, 4, and 6 Figure 1. Other cases were no visible abnormalities on alveolar crest in the lesion region. The lesions were surgically excised and histopathological examinations were performed. The lesions were diagnosed as pyogenic granuloma in Case 1, 2, 3, and 4, as peripheral ossifying fibroma in Case 5, 6 and 7 as traumatic fibroma in Case 8 and 9 and as peripheral giant cell granuloma in Case 10.

Discussion

In this case series, ten reactive hyperplasias were evaluated according to their clinic, radiographic, and histopathologic features. Ramirez et al. have reported fibrous hyperplasia as the most percentage of RHL.² Ababneh et al. and Zarei et al. have reported pyogenic granuloma as the most prevalent of RHL.^{3,6} The present case series has been found that pyogenic granuloma have a higher frequency. The most frequent RHL may vary depending on the study

methodology, the difference in classification used, and the patient population. Local and systemic irritation factors such as hormonal changes caused by pregnancy, poor oral hygiene, periodontal diseases, dental calculus, and incompatible prosthetic restoration lead to RHL.^{3,7} In this case series, hormonal changes in three patients, calculus in three patients, incompatible prosthetic restoration in two patients, and local trauma in two patients were considered as etiological factors. Were detected in the patients in accordance with previous studies.^{3,7} It is known that the elimination of the etiological factor is very important in the treatment of the lesions and in the prevention of their recurrence.⁷ Ramirez et al., Zarei et al., and Salum et al. have reported a higher RHL frequency in females than in males.^{2,3,8} In the case series, RHL was more common in females than in males. According to localization, it is reported that pyogenic granuloma lesions are mostly observed in the anterior maxilla and peripheral ossifying fibroma lesions are mostly observed in the mandible.^{3,9} In the present case series, the localizations of pyogenic granuloma and peripheral ossifying fibroma lesions were consistent with the literature

Conclusion

In this case series, according to the clinic, radiologic and histopathological features, diagnosis of the lesions was carried out as pyogenic granuloma (four cases; 40%), peripheral ossifying fibroma (three cases; 30%), traumatic fibroma (two cases; 20%) and peripheral giant cell granuloma (one case; 10%). It was concluded that the lesions examined were mostly caused by local factors. The most common clinical findings were painless red mass, smooth-surfaced, soft consistency and no finding was observed in the radiographic examination.

Author Contributions

N.B conceived the ideas, collected and analyzed the data of cases, scanned literature, and wrote the manuscript. İ.P and Ö.Ü conceived the ideas, made the necessary corrections, scanned literature, and final edits.

Table 1. Clinic and radiographical characteristics of reactive hyperplasia lesions

Case No	Age/ Gender	Complaint	Localiza-tion	Lesion feature	Radiography findings	Diagnosis	Etiological factors
1	28/Female	Swelling at second trimester of pregnancy	Palatal gingiva, maxilla	Large pinkish red lobular mass, pedunculated, soft, painless, smooth-surfaced	Minimal resorption on alveolar crest	Pyogenic granuloma	Hormonal changes
2	24/Female	Swelling at second trimester of pregnancy	Palatal gingiva, maxilla	Soft red, ulcerated mass, sessile, painless,	None	Pyogenic granuloma	Hormonal changes
3	28/Female	Swelling at second trimester of pregnancy	Buccal gingiva, maxilla	Soft pinkish red lobular mass, smooth-surfaced, sessile, painless	None	Pyogenic granuloma	Hormonal changes
4	35/Male	Swelling after tooth extraction	Buccal gingiva, maxilla	Pinkish red nodule, smooth-surfaced	Minimal resorption on alveolar crest	Pyogenic granuloma	Tooth extraction-related trauma
5	21/Male	Two months swelling	Labial gingiva, mandible	Soft red nodular mass, smooth-surfaced	None	Peripheral ossifying fibroma	Calculus
6	55/Female	Two weeks swelling	Labial gingiva, maxilla	Soft pink nodular mass, smooth-surfaced, painless	Minimal resorption on alveolar crest	Peripheral ossifying fibroma	Incompatible prosthetic restoration
7	70/Female	Two months swelling	Labial gingiva, mandible	Soft pink nodular mass, smooth-surfaced, painless	None	Peripheral ossifying fibroma	Incompatible prosthetic restoration
8	21/Female	Two weeks swelling	Labial gingiva, mandible	Soft pink nodular mass, smooth-surfaced, painless	None	Traumatic fibroma	Calculus-related trauma
9	55/Male	Two weeks swelling	Labial mucosa, lower lip	Small white and pink masses, smooth-surfaced, painless	None	Traumatic fibroma	Local trauma
10	60/Female	Four months swelling	Labial and palatal gingiva, maxilla	Pink lobular mass, smooth-surfaced, painless	None	Peripheral giant cell granuloma	Calculus

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