An Unusual Treatment of Oral Lichenoid Reaction without Cutaneous Involvement: A Case Report

SUMMARY

Oral lichenoid reaction is a clinical entity characterized by microscopic features of hypersensitivity due to foreign body or contact reaction. It is usually presented in the cheek mucosa after chronic contact irritation from various materials used in dentistry. Amalgam restoration of tooth cavities has been used for many decades. This filling material is occasionally suspected for chronic epidermal reactions in the oral cavity. This article discusses the reason of choosing an unusual treatment option without pharmaceutical use that found to be successful.

Keywords: Oral Lichenoid Reaction, Tooth Extraction, Amalgam Filling

Introduction

Lichenoid reaction in oral cavity is an immunological condition usually associated to delayed hypersensitivity when a metallic tooth restoration appeared to be in chronic contact to the oral mucosal surface. The diagnosis of this usual condition should be based on clinical examination and histopathological evaluation. Since it is a disease of the mucosa, usually of limited size, the partial biopsy technique could be a non-aggressive diagnostic method, including only a thin portion of healthy and diseased tissue. This is usually difficult in inexperienced surgeon hands in which case the examined tissue should be wider. The implication of metals in the origin of the lichenoid reaction has been adjusted from scientific sources. Mercury, included in higher concentration in amalgam fillings compared to other components, is suspected as the primary etiological factor of this contact reaction. An alloy mixed with amalgam is usually composed of silver, tin, copper, and sometimes smaller amounts of zinc, palladium, or indium. Therefore the hypersensitivity may be found to one of those components, which may be difficult to evaluate. Recently the patch test to specific components has been used for evaluation of hypersensitivity reaction to specific components of the amalgam filling, but according to the evidence, this technique had many limitations.

In our case, a lady was presented in the clinic complaining of painless lesion on the buccal mucosa lateral to the lower right third molar. A discussion on the management of this case will be addressed with a great emphasis on the decision making.

Case Report

A 48-year-old lady presented with painless cheek erythro-leukoplakia adjacent to the lower right third molar. It could be described as a unilateral, non reticulated, oval lesion with mixed white and red patches, like erythroleukoplakia (Fig. 1). The tooth 48 was restored with amalgam filling 2 years ago due to caries. The patient was otherwise fit and healthy. She was occasionally smoking cigarettes for 15 years (2-5 cigarettes per day) without drinking alcohol. No pathology was observed on head and neck inspection and palpation. There were not other signs of pruritic, purple or polygonal papules on other body sites. The Koebner phenomenon was negative. No Wickham’s striae found. Not known allergies reported. The full blood count was found normal.
A biopsy specimen was taken under local infiltration (2% lidocaine with 1:80000 adrenaline). The specimen (0.7cm x 0.3cm x 0.2cm) was stored in 10% buffered formalin for 48 hours and processed for histopathology. In the centric area the epithelium presented hyperplastic with parakeratotic features without atypic mitotic signs, but with sort “axe” like projection of the chorium into epithelium. The presence of massive lymphocyte infiltration occurred in areas of chronic inflammatory reaction in submucosa in the region of dermo-epidermal junction. The associated basal keratinocytes showed degeneration, necrosis and squamatization. Cluster of Civatte bodies presented in the papillary and reticular regions of the chorium. The previous micro-findings revealed the diagnosis of chronic superficial mucosal lichenoid reaction of possible hypersensitivity reaction to amalgam filling (Fig. 2).

The patch test was not used in our case since this technique is controversial and not evidence-based for oral lichenoid reactions. Furthermore in our case there was nothing to serve in management protocol.

A written consent form was filled and signed, explaining the advantages and disadvantages of the available treatment options. It was finally decided to extract the lower right third molar (Fig. 3). 6 weeks after extraction, the mucosa almost appeared healthy with normal colour without white or red patches (Fig. 4). After this observation, the patient is followed-up semi-annually.
Discussion

Tooth extraction is a mechanical process of pulling the tooth out of the socket. This process should be performed in cases where other treatment options are not available or are contraindicated. This opinion is stated due to functional and aesthetic reasons. In our case, the third molar was partially out of the occlusion due to anatomical position in the arc, providing partial functional considerations. Furthermore, there were no aesthetic reasons against the decision due to posterior location.

The recommended treatment option of filling replacement with rubber dam and topical application of medicaments or rinsing solutions was rejected by the patient. The other option of crown preparation was rejected by the clinical team due to difficulties in preparation if the tooth is encircled by a rubber dam. We recommended rubber dam to avoid contact of cut filling with other sites of oral mucosa. Furthermore, the gastrointestinal and respiratory system would be protected from a complication, such as swallow or aspiration of amalgam sections or air-borne particles created by handpiece. According to toxicology evaluation of the literature there is disputing evidence for the toxicity of amalgam vaporization due to various mandibular functions. The patient decided to extract the tooth without steroids application or use of other medication. A written consent form was filled and kept in patients file.

Oral lichenoid reaction could be divided into 2 types. The first should be described as foreign body reaction due to chronic entrapment of amalgam (tattoo) into the affected tissue and the other in association to contact reaction, such as in our reported case. In the first type, the pigmented patch of the mucosa may be an important diagnostic clinical feature. A condition that could be assessed by x-rays to exclude the possibility of non-metallic materials existence into the tissues, such as endodontic sealants, toothpastes and impression components.

It is worth noting that in the literature the main management option indicated was the filling replacement. This should be strongly recommended in cases where functional and aesthetic implications presented. It is generally accepted that there should be no other available treatment option to extract a tooth under an all-inclusive discussion with a patient regarding the advantages and disadvantages of each technique.

The atrophic pattern of lichenoid reaction may be observed as a desquamative lesion. Therefore all the lesions that may be presented as desquamation of the oral tissues, such as lichen planus, pemphigoid, chronic ulcerative gingivitis, dermatitis herpetiformis, linear IgA disease, pemphigus, erythema multiforme, pyostomatitis vegetans should be definitely involved in the field of differential diagnosis.

Oral lichenoid reactions are potentially malignant lesions requiring proper management and regular follow ups to evaluate possible transformation to oral malignancy in early stages. This finding should create a scientific debate based on the benefits of radical treatment, such as tooth extraction. In our case, there was no scepticism about the final treatment in full cooperation with the patient. Finally, the patients should be encouraged to cease smoking as it could affect the prognosis.

Conclusion

We suggest the extraction of teeth that associated with oral lichenoid reactions without cutaneous involvement and functional or aesthetic implications should be included as an alternative management in addition to the well established, up to date filling replacement. Verbal information and written consent form about the procedure are required prior to the extraction. We have to keep in mind that the patient is cooperating in cases where “must” is dissimilar from “need”.

Acknowledgements. We thank the patient for the consent form given for publishing the manuscript.

References


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