

ORAL LICHENOID REACTION- A CASE REPORT

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ABSTRACT

Dental amalgam has been used as a restorative material since more than 100 years in spite of its poor esthetics, galvanic reaction, microrleakage and few allergic reaction. Mercury and other metallic components of amalgam may produce mucosal lesion in susceptible patients which look like oral lichen planus. The only treatment of this is to remove the amalgam restoration and replace it with other alternative material. Here is a case report presents a patient with unilateral oral lichenoid reaction to dental amalgam.

Key words:

Dental amalgam, Oral lichenoid reaction, Type IV Hypersensitivity.

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INTRODUCTION

Oral lichenoid reaction(OLR) is a lesion clinically and histologically resembling from oral lichen planus (OLP). However the OLR usually vanishes when the causing factor is eliminated, generally a drug (antibiotics, antidepressants, antihypertensive, antiaggregants, cardiac glycosides, oral hypoglycemic, vasodilators, NSAIDS, sympathomimetics generally) or dental and prosthetic materials.⁽¹⁾

'H' antigen is a blood group antigen present in all the individuals irrespective of blood group types. It is the precursor for the formation of A and B antigen. The people having A or B blood groups, the precursor H antigen is converted to A and B antigen respectively; but in case of "O" blood group people, it remains in the original forms. Persons with 'O' group have the highest amount of H antigen, that affords protection against the OLP. The 'O' blood group persons were least susceptible to develop the OLP, which corresponds with the results of oral cancer patients⁽²⁻³⁾

Case report-A 8-year old male patient reports to the outpatient department of Pedodontia with a complaint of white lesion in the left buccal mucosa with soreness and tingling sensation that becomes worse with spicy food. He received vitamin and local steroid application but the symptom did not subside. On observation, there was a white thready lesion on left buccal mucosa and there was an amalgam filling in the left mandibular second molar 3 years ago.

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The rest of the oral mucosa appears normal. The white patch when removed show an erythematous area. The amalgam filling was removed with rubber dam isolation and copious irrigation and high aspiration vacuum. The cavity was filled with type II Glass Ionomer cement. After two weeks, the patient came with free of discomfort and the lesion area there was a healing ulcer that is undergoing melanin pigmentation that looks like a healing lichen planus.



Fig 1 Oral lichenoid reaction proximity to amalgam restoration



Fig 2 Healing Oral lichenoid reaction after replacement of amalgam with Glass Ionomer Type II

DISCUSSION

In spite of the fact, that dental amalgam is the most commonly used as posterior restorative material, but a few cases of amalgam sensitivity have been reported. Clinically and histopathologically the reaction resembles idiopathic oral lichen planus.⁽⁴⁻⁶⁾ But unlikely lichen planus there are some clinical observations:

That the lesion is asymmetrical, mainly unilateral (provided the amalgam filling is only in one side), localized and there must be close proximity to amalgam filling. The buccal mucosa is most commonly affected and the border of tongue is the next commonest site. Lesion is mainly asymptomatic or show pain and sensitivity to eating hot and spicy food.⁽⁷⁾

Mechanism of reaction: The reaction appears to be a T-cell-mediated delayed hypersensitivity reaction (type IV) contact hypersensitivity reaction to either the mercury or another component of amalgam. The reaction may be delayed for at least two days and clinical picture depends on the severity of the reaction.^(8,9)

From previous studies, it was known that oral lichenoid reaction patients showed higher presentation of nuclear factor κ B-dependent cytokines in serum, oral keratinocytes and tissue-infiltrated mononuclear cells including TNF- α , IL-1 and IL-6.⁽¹⁰⁻¹²⁾

Treatment: The only treatment for this condition is to remove the amalgam filling with alternative restorative materials.

CONCLUSION

Dental amalgam filling has been used as a restorative dental material for more than 100 years. But it may cause oral lichenoid reaction in susceptible patients. So a patch test is recommended before such restoration. When oral lichenoid reaction is present in the vicinity of amalgam restoration, replacement of such restoration with alternative restorative material is recommended.⁽¹³⁻¹⁴⁾

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