

DIAGNOSIS AND MANAGEMENT OF RECURRENT CARIES

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INTRODUCTION

Dental caries is a biofilm-mediated, diet modulated, multifactorial, non-communicable, dynamic disease resulting in net mineral loss of dental hard tissues and it is determined by biological, behavioral, psychosocial and environmental factors. But despite the fact that today there are a lot of modern materials to restore the hard tissue affected by caries, a problem remains the appearance of recurrent or secondary caries that has developed adjacent to margins of restorations. So, a vital part is the early detection of recurrent caries that may allow provision of less invasive treatment options like resealing or repairing instead of complete removal and replacement of restorations.

PURPOSE

To assess how to control, detect and treat secondary caries.

MATERIAL AND METHODS

It was performed the examination of 16 patients, 8 men and 8 women, between the ages of 18-55. Clinical and paraclinical examination have established the diagnosis of recurrent caries for 32 teeth. The treatment was done by cleaning the caries and repairing or replacement of existing restorations.

RESULTS

From 32 teeth taken into the study, 22 were maxilla teeth (68,75 %) and 10 were mandibular teeth (31,25 %); 25 were posterior teeth (78,13 %) and 7 - anterior teeth (21,87%). From 45 surfaces affected by recurrent caries, occlusal surfaces were involved in 10 cases (22, 3 %), mesial surfaces in 14 cases (31,2 %), distal surfaces in 16 cases (35,5 %), vestibular surfaces in 4 cases (8,8 %) and oral surfaces in 1 case (2,2 %). According to the treatment methods of recurrent caries, 19 teeth (56,37 %) were treated by using repairing method and 13 teeth (40,63%) by using replacement method.

KEYWORDS

Recurrent caries, repair, replacement.



Fig.1 Intraoral view. Occlusal and palatal surfaces. Diagnosis: Recurrent caries in teeth 14, 15,16.



Fig.2 X-ray (taken from CT)



Fig.3 Total removing of existing restoration in t.16 and partial in t.15



Fig.4 Matrix adaptation t.16



Fig.5 Medicamentous processing with sol.chlorhexidine 2 %



Fig.6 Tooth 16 after etching and bonding

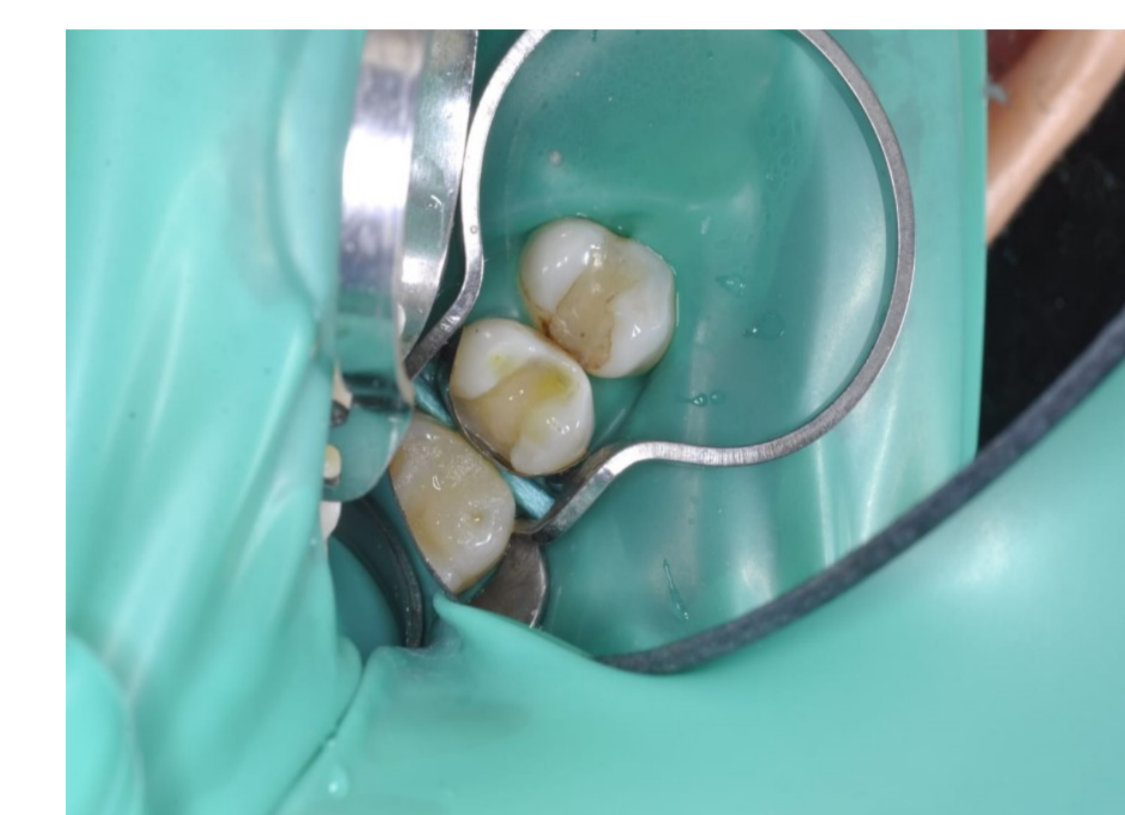


Fig.7 Processing of the remained filling with hydrofluoric acid 9 %



Fig.8 Tooth 15. Etching

CONCLUSIONS

- 1.The etiology of recurrent caries is similar to primary dental caries, but accelerated accumulation of biofilm mass is caused by microleakage, poor marginal fit of restoration and overhangs. Proximal surfaces of the teeth are the most affected.
- 2.The diagnosis of caries is established during visual inspection, tactile sensation with explorer usage and radiographic interpretation. Detected secondary caries can be managed by repair of the defective part of the restoration or its complete replacement. Its depends on the patient and teeth criteria.
- 3.The prophylaxis of recurrent caries is directed to patient dental care and doctor's work.



Fig.9 Intraoral view after treatment t.15, 16



Fig.10 Bite-wing Xray after treatment

Patient

- Patient motivation: communication, education.
- Diet: sugar-free alternatives advice
- Oral hygiene advice: effective removal of plaque; suitable toothbrush
- Interdental cleaning: efficient technique – wide range of aids available
- Regular professional monitoring: plaque disclosing, plaque removal

Doctor

- The use of good methods for isolation in order to avoid microleakage
- A perfect marginal fitting of the restoration,
- Avoiding overhang restorations

Fig.11 Prophylaxis plan