

# Lesion Sterilization and Tissue Repair in lower primary E: A Case Report

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## ABSTRACT

Three mix medicament of metronidazole, ciprofloxacin and monocycline in a root canal sealer placed at orifices of root canals in lower primary E and sealed with glass-ionomer cement as base and further reinforced with amalgam filling followed by final restoration of stainless steel crown.

## KEYWORDS

Endodontic, lesion, LSTR, Mix drug.

## INTRODUCTION

Teeth with infected root canals are common problem in primary dentition; early loss of primary teeth can cause a number of problems, including space loss for successor permanent teeth. Thus an intact tooth successfully disinfected and restored is superior space maintainer than an appliance.<sup>1</sup>

Metronidazole was the first choice because it has wide bacterial spectrum against anaerobes which were common in oral sites<sup>2</sup> However, some bacteria in lesions were resistant to metronidazole thus two other anti-bacterial drugs e.g ciprofloxacin and monocycline should be mixed with metronidazole in an effort to eliminate all bacteria.<sup>3-5</sup> **Figure 1** shows the three antibiotics (Monocycline, Metronidazole, Ciprofloxacin).

## CLINICAL PROCEDURES

A 6 years old male child was seen in a pediatric clinic for evaluation and treatment, the dental history revealed that the patient has spontaneous dull pain increased while sleeping in lower primary second molar E.

- Preoperative radiograph shows no changes in the periapical area, no root resorption. (**Fig. 2a,b**)

- Clinical examination: Shows carious E with mesial cavity. No sinus or gingival swelling. (**Fig. 3**)

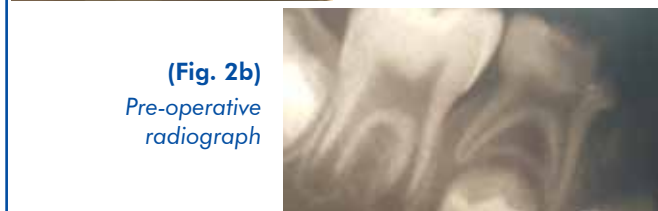
- Procedure: After giving local anesthesia, carious removal was done, access opening was performed then the walls of the access cavity were chemically cleaned using 35% phosphoric acid solution before applying 3 Mix-sealer. The orifice of the root canal was enlarged to create amedication cavity (diameter 1mm and depth 2mm) hemorrhage was stopped using cotton pellets



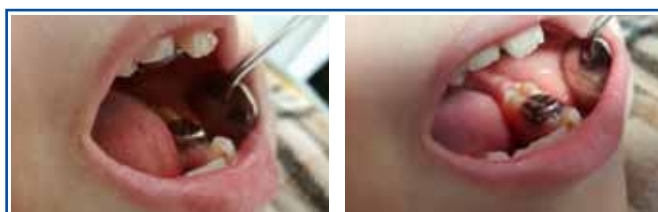
(Fig. 1) Three antibiotics (Monocycline, Metronidazole, Ciprofloxacin)



(Fig. 2a)  
Post operative  
radiograph



(Fig. 2b)  
Pre-operative  
radiograph



(Fig. 3) Final Restoration

immersed in 10 % Naocl. Then 3mix-sealer was applied after preparing with aratio of 1:3:3 the medication cavity was then half-filled with 3mix- sealer and the cavity was sealed with GI cement and reinforced with amalgam completed in one visit. Another visit was required to restore with final restoration of stainless steel crown.

## CLINICAL EVALUATION

Resolution of clinical symptoms was checked after treatment within 10 days following the procedure. The tooth was firmly attached in the jaw, in function without pain or infection.

## DISCUSSION

The results demonstrate that primary tooth was conserved by LSTR endodontic therapy with excellent clinical result in a single visit, this therapy apparently depends on the elimination of bacteria from the root canal system but not on mechanical procedures. Therefore the clinical procedure is simple and does not require long chair time or multiple visits, the drug mixture was able to penetrate into the endodontic lesion of primary teeth and killed all the bacteria in the 1<sup>st</sup> day indicating that the lesions can be sterilized by topical application of 3 mix drug. There were no reported side-effects in LSTR.

## CONCLUSION

LSTR therapy using 3 mix-sealer; a mixture of metronidazole, ciprofloxacin and monocycline with root canal sealer provide an excellent outcome in treatment of infected root canals of primary teeth.

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