

Average Life Expectancy of Lesion Sterilization Tissue Repaired Primary Molars

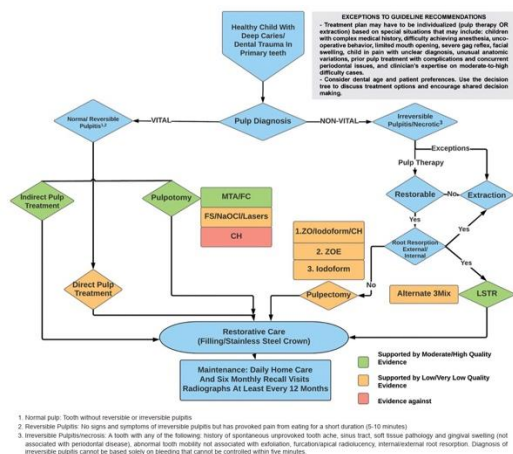
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BACKGROUND

This research project is a retrospective study that aims to evaluate the clinical and radiographic success of lesion sterilization tissue repair also known as LSTR. LSTR is currently recommended for primary molars exhibiting clinical or radiographic signs or symptoms consistent with necrosis or irreversible pulpitis that are deemed restorable and is the treatment of choice over pulpectomy when teeth exhibit signs of internal or external root resorption. The treatment entails removing infected coronal pulp tissue, irrigating with sodium hypochlorite to achieve hemostasis, followed by placement of a triple antibiotic paste on the pulpal floor (amoxicillin/clindamycin, metronidazole and ciprofloxacin), and sealed with glass ionomer and a crown. If successful you should have a decrease or resolution of radiographic PARL/furcal radiolucency as well as resolution of clinical signs and symptoms. This allows the tooth to be the natural space holder in the arch rather than needing to do space maintenance (BLOOP, LLHA or Nance). Currently the American Academy of Pediatric Dentistry recommends doing lesion sterilization tissue repair on primary molars if you only need the life expectancy of the tooth to be up to 12 months.

QUESTION TREE

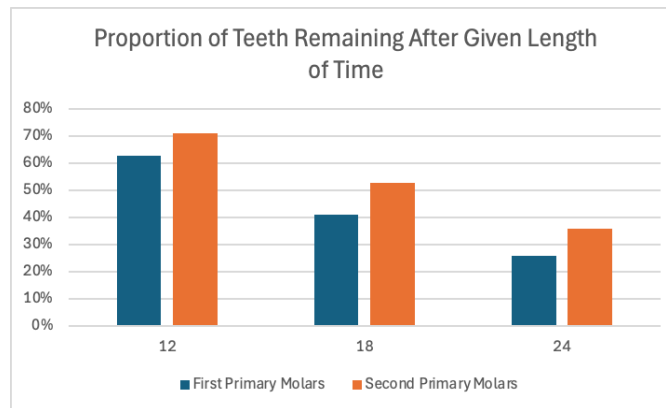


METHODS

This retrospective study evaluated the longevity of primary molars treated with LSTR. 122 eligible teeth were reviewed and 86 were deemed appropriate for our study if we had record of at least one follow-up visit no less than six months after the initial procedure. Two evaluators reviewed the charts individually and evaluated clinical and radiographic success vs failure. Radiographic failure included evidence of premature external and internal resorption of the tooth and bone loss in the furcation or apical area of the tooth. Clinical failure included reported symptoms of pain and discomfort, up to and including extraction of the tooth. The time elapsed from initial completion of the LSTR procedure to loss of the tooth was recorded for both primary first and primary second molars. The data was then fit into a survival analysis curve known as a cox mixed effects model which evaluates time-to-event data, with the event being tooth loss. This model served to account for those patients with multiple LSTR treated teeth and differing start dates.

RESULTS

Inter-reviewer consistency in evaluating radiographic and clinical success were 98% and 100% respectively (84/86 and 86/86). Data were collected for sex, race/ethnicity, primary language, insurance carrier, number of teeth treated per patient, tooth type, mouth location, bone loss detected, and clinical and radiographic failure.



CONCLUSIONS

In conclusion, we found that our study aligns with the AAPD's current recommendation that LSTR should be chosen over pulpectomy in teeth with root resorption or to retain teeth that otherwise would be extracted for up to 12 months. Due to confounding variables such as inconsistent follow-up and data limitations, this topic should be studied further.

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