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BACKGROUND

- Pre Eruptive Intracoronal Resorption (PEIR) lesions are a relatively uncharted area in the field of pediatric dentistry, with limited research and understanding of its underlying causes, diagnostic modalities, and treatment strategies.
- PEIR lesions are abnormal, well circumscribed, radiolucent areas occurring in the coronal dentinal tissue in close proximity to the dentinal enamel junction of unerupted teeth.
- Majority of studies suggest that pre eruptive lesions are resorptive in nature due to the presence of multinucleate cells, osteoclasts, and other chronic inflammatory cells.

OBJECTIVES

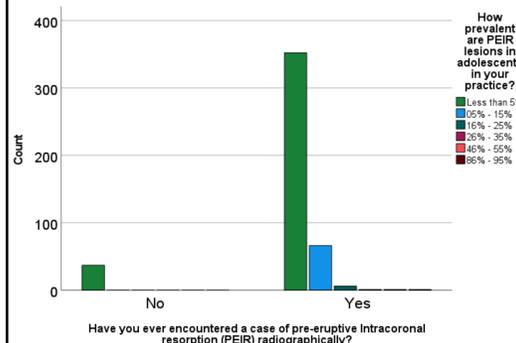
- Objective is to determine whether treatment should be performed on PEIR lesions, or if they should be monitored if asymptomatic.
- The goal of this study is to assess the prevalence of pre eruptive intracoronal resorption (PEIR) in the pediatric population, and different treatment modalities utilized by pediatric dentists.

METHODS

- Online Survey sent out to 6,300 Pediatric Dentists.
- Pediatric Dentists were asked several multiple choice questions related to their experience with PEIR lesions.
- Questions determined whether or not they have seen PEIR lesions on a radiograph, and whether they opt to treat lesions or to monitor them.
- Statistical analyses was completed using Pearson Chi-Square, Likelihood Ratio, and Linear-By-Linear Association Test out of the 464 survey responses.

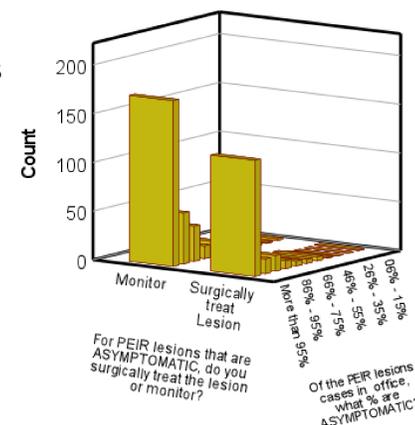
RESULTS

- From 6,300 surveys sent out, **464** responses were received.
- **427** Pediatric dentists state that they have encountered a case of PEIR radiographically, **37** responded that they have not. Dentists who state they have not were excluded from some statistical analysis.

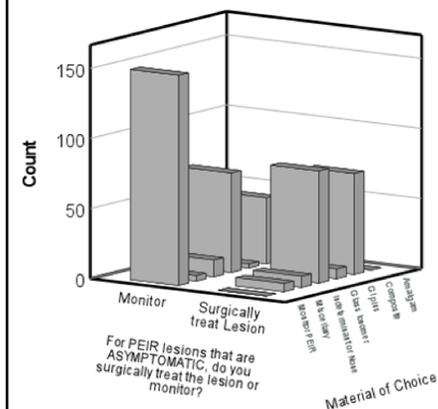


- Dentists who state they have seen a case of PEIR, **389** (84%) state that it is seen in **less than 5%** of patients. **66** (14%) state that it is seen in **5%-15%** of patients. **455** (98%) stating an occurrence **less than 15%**.

- Dentists who saw PEIR lesions, **362** (78%) state the patient was **ASYMPTOMATIC** in more than 75% of cases.
- For patients that were **ASYMPTOMATIC**, **291** (63%) chose to **monitor** lesion while **173** (37%) **chose to treat**.



% Materials of Choice



- Out of **314** dentists who opt to treat PEIR lesions, **280** (**89%**) chose to restore the tooth with either Composite or Glass Ionomer.

RESULTS CONTINUED

- Three tests (Pearson Chi-Square, Likelihood Ratio, and Linear-By-Linear Association) were completed.
- Linear-By-Linear test was statistically significant assuming a P-Value of <0.055.
- Pearson Chi-Square and Likelihood Ratio test showed no statistical significance.
- A decision whether to monitor or surgically treat a PEIR lesion should be made based on clinical and radiographic presentation.
- One limitation of the survey was study size of recipients. A larger response rate is need.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.225 ^a	6	.057
Likelihood Ratio	11.256	6	.081
Linear-by-Linear Association	3.744	1	.053
McNemar-Bowker Test			^b
N of Valid Cases	464		

a. 5 cells (35.7%) have expected count less than 5. The minimum expected count is 1.06.
b. Computed only for a P x P table, where P must be greater than 1.

DISCUSSION

- Although results in some statistical analysis tests may be statistically insignificant, clinical significance may still be relevant.
- The majority of Pediatric Dentists chose to monitor PEIR lesions if they were asymptomatic.
- Final decisions on whether or not to monitor PEIR lesions or to treat them surgically should be made by the Pediatric dentist providing treatment.
- More input is needed on whether or not PEIR lesions should be monitored or treated surgically, and their long term prognosis.

REFERENCES

Konde S, Sri Darshini CS, Agarwal M, Peethambar P. Unrevealed Caries in Unerupted Teeth: A Prevalence Study. Contemp Clin Dent. 2018 Sep;9(Suppl 2):S305-S308. doi: 10.4103/ccd.ccd_291_18. PMID: 30294162; PMCID: PMC6169283

Muhler JC. The effect of apical inflammation of the primary teeth on dental caries in the permanent teeth. J Dent Child. 1957;24:209-10

Savage NW, Gentner M, Symons AL. Preeruptive intracoronal radiolucencies: Review and report of case. ASDC J Dent Child. 1998;65:36-40.