Follow-Up Treatment after Oral Antibiotics: A Retrospective Study

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Background

In clinical scenarios where the pediatric patient presents with acute symptoms of pulpitis, treatment should include immediate surgical intervention to control the source of pain or infection [1]. Oral antibiotics are not indicated in the absence of systemic signs of infection.

Presently, data on follow-up treatment after oral antibiotics are prescribed for odontogenic infection is not found in the literature.

Of primary interest in this study is the rate of follow-up treatment after oral antibiotics are prescribed. Of secondary interest is the association between various patient characteristics (i.e. age, dentition status, medical diagnosis) and follow-up rate.

Methods

A retrospective chart review of electronic medical records was performed of patients who presented to an urban university-affiliated hospital with a dental problem between October 2018 and June 2023. Follow-up was defined as completion of an oral evaluation, extraction, pulpotomy, resin-based composite, pre-fabricated stainless-steel crown, or incision and drainage of abscess of intraoral soft tissue. Covariates included age, gender, race/ethnicity, medical diagnosis, social determinants of health screener, and CDC Social Vulnerability Index (SVI).

Results

Table 1. Demographic characteristics of the study population (n=43)

Demographic Characteristic	N, %
Gender	
Male	24, 55.8%
Female	19, 44.2%
Race and Ethnicity	
Black / African American	17, 39.5%
Declined	9, 20.9%
Other	8, 18.6%
Hispanic or Latino	3, 7.0%
Unknown	3, 7.0%
Asian	2, 4.7%
White	1, 2.3%
Insurance	
Medicaid	35, 81.4%
Commercial	6, 14.0%
Other	2, 4.7%
Medical Status	
SHCN	28, 65.1%
Non-contributory	15, 34.9%

Results

Table 2. Comparative follow-up rates by dentition, age, and medical status (n=43)

Dentition	Follow-Up	No Follow-Up
Primary tooth	19	18
Permanent tooth	0	5
Chi squared equals 4.689 with 1 degrees of freedom		
The two-tailed P value equals 0.0304 *		
Age	**Follow-Up**	**No Follow-Up**
Age < 10 years	0	6
Age > 10 years	19	18
Chi squared equals 5.520 with 1 degrees of freedom		
The two-tailed P value equals 0.0188 *		
Medical Status	**Follow-Up**	**No Follow-Up**
SHCN	10	18
Non-contributory	9	6
Chi squared equals 2.336 with 1 degrees of freedom		
The two-tailed P value equals 0.1264		
Dental Arch	**Follow-Up**	**No Follow-Up**
Maxillary tooth	3	8
Mandibular tooth	14	14
Chi squared equals 1.659 with 1 degrees of freedom		
The two-tailed P value equals 0.1977		

* Patients with permanent tooth conditions were less likely to follow-up for dental care after receiving oral antibiotics (P<0.05). Patients under the age of 10 were less likely to follow-up for dental care after receiving oral antibiotics (P<0.05).

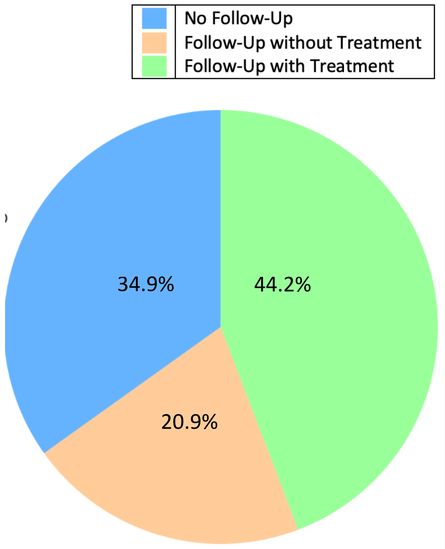

Figure 1. Follow-up modalities post-antibiotic therapy

Discussion

A lower follow-up rate in children under 10 may be explained by an improvement in symptoms, patient or parental fear, or a lack of parental understanding of the significance of treating caries in the primary dentition. With a lower follow-up rate in patients with permanent tooth conditions, it is critical to consider that a number of these patients were referred for endodontic treatment and consequently may not have presented internally for follow-up.

Existing literature suggests that the COVID-19 pandemic was associated with significantly reduced direct operative, periodontal, oral surgery, and palliative procedures in most of 2020 through 2021 [2].

Clinicians should remain cognizant of possible loss to follow-up when prescribing oral antibiotics in the setting of acute pulpitis.

Conclusions

Preliminary results suggest children under 10 and patients with permanent tooth conditions may be less likely to follow-up for dental care.

Additional research with a larger sample is indicated.

References

Please scan for references