

PAEDIATRICIAN ↔ PAEDIATRIC DENTIST; Together we can

Dr. Sneha Shah
Dr. Kiran Raj
Dr. Sowmya B. Shethy

Abstract:-

Context: Pediatrician's can educate the parents about early oral preventive care, identify and prevent further progression of any dental problems.

Aims: To elicit the knowledge of a Pediatrician about: 1) Oral hygiene measures after prescribing sugar/sugar free syrups. 2) Including dental aspect as a part of general health check-up. 3) Referring the patient to a Pediatric dentist on daily basis for further evaluation.

Settings and Design: A comprehensive questionnaire with 10 questions was prepared and provided to 50 Pediatrician's in Mangalore. The questionnaire had questions to assess the knowledge about dental caries, habits and overall oral health, attitude and awareness towards its prevention and practice guidelines and opinions.

Methods and Material: A detailed questionnaire was prepared.

Statistical analysis used: Data will be entered in the excel spread sheet. Descriptive statistics like percentages and proportions will be calculated. Inferential statistics like chi-square test will be used for categorical variables using SPSS version 20. (IBM SPASS statistics [IBM corp. released 2011]).

Results: Out of 50 Pediatrician's, 72% do not give oral hygiene measures after syrups and are unaware of sugar free syrups, 68% do not include dental aspect as a part of general health check-up and 70% do not refer a child to a Pediatric dentist.

Conclusions: More interactions between the Pediatrician's and Pediatric dentist will aid to handle the infant population and provide them complete overall health and improve the quality of living.

Keywords:- Infant Oral Health Care, Pediatrician, Pediatric Dentist, Preventive Dentistry.

I. INTRODUCTION

The American Academy of Pediatric dentist (AAPD) recognizes that infant oral health is one of the foundations upon which preventive education and dental care must be built, to enhance the opportunity for a lifetime free from preventable oral diseases¹. In Pediatric Dentistry, the advancement of oral hygiene and preventive dental treatment are central principles. Pediatric dentistry today has a body of clinical expertise and technologies to help parents grow children who are caries-free. Early screening in children under 1 year of age is an outstanding chance for risk factors to be identified. The aim is to include a fun, non-threatening introduction to dentistry for infants and toddlers and to establish and improve the basis for healthy dental habits. The role of the Pediatrician in oral health was formalized by the 2003 policy statement of the American Academy of Pediatrics (AAP), Oral Health Risk Assessment Timing and Dental Home Establishment², which proposed that Pediatricians and other primary care professionals integrate preventive oral health education into their practices and that children receive an oral health risk assessment. The AAP Policy Statement, Preventive Oral Health Strategies for Pediatricians, published in 2008 has further strengthened this position³. Oral health is an important part of general health and poor oral health for young children can have significant negative consequences for general and social, intellectual, physical, and emotional development[11]. An early screening of oral cavity is an excellent opportunity for detection of risk factors. Pediatrician's see a child from birth for general health check-up. They can identify and prevent further progression of dental problems and educate the parents about early oral preventive healthcare and need to visit a Pediatric dentist[3].

AIM

To elicit the knowledge of a Paediatrician about:

- Involving dental aspect as a part of general health check-up.
- Oral hygiene measures after prescribing sugar/sugar free syrups.
- Referring the patient to a Paediatric dentist on daily basis for further evaluation.

Subjects and Methods

The present survey was undertaken among the Paediatricians of Mangalore. A comprehensive questionnaire was prepared based on the studies done by Indira et al, Rajwinder et al, Prakash et al and Murthy et al. The questionnaire contained 10 questions. The results obtained were subjected to statistical analysis using SPSS version 20.

QUESTIONNAIRE

- 1) Number of patients seen per day?
- 2) Do you consider oral hygiene practice as a part of general health education?
- 3) Do you examine teeth as a part of routine general physical examination?
- 4) When do you suggest initiation of tooth brushing in kids?
- 5) Do you prescribe sugar/ sugar free syrups?
- 6) Do you advise children with special health care needs for regular dental check-ups?
- 7) Patients with inhaler therapy has high incidence of dry mouth and dental caries. Will you give any special instructions to prevent it?
- 8) Do you refer a child with habits like thumb sucking, mouth breathing, lip biting, and tongue thrusting to a Paediatric dentist as soon as you notice it?
- 9) Do you consider a paediatric patient with dental infection requires immediate dental treatment consideration or antibiotic therapy followed by dental treatment?
- 10) What is your opinion on role of Paediatrician to promote oral health care and prevent dental diseases?

Statistical Analysis:

Data will be entered in the excel spread sheet. Descriptive statistics like percentages and proportions will be calculated. Inferential statistics like chi-square test will be used for categorical variables using SPSS (statistical Package for Social Sciences) version 20. (IBM SPASS statistics [IBM corp. released 2011]. Any other necessary tests will be dealt at the time of analysis based on data distribution.

II. RESULTS

Out of 50 Paediatrician’s, 72% deny giving any oral hygiene measures after syrups and are unaware of sugar free syrups, 68% do not include dental health as a part of general health check-up and 70% do not refer a child to a paediatric dentist. Many Paediatrician’s feel that knowledge imparted in medical colleges and hospitals is inadequate as far as infant oral health is concerned. There is a need to educate Paediatrician’s on infant oral healthcare by conducting regular health educative programs. In case of habit breaking, Paediatrician’s prefer to refer to a Clinical Psychologist instead of a Pediatric dentist. From this study, it can be concluded that majority of the Paediatrician’s do not involve teeth as a part of general check-up, have less knowledge on sugar free syrups, and they minimally refer a patient to a Paediatric dentist unless a complaint arises from the patient.

Table 1:- Itstates maximum patients seen by most Pediatrician’s range from 11-20 per day (46.0%) followed by more than 20 patients (36%) per day. (Chi square 2.14 and p value 0.34).

Q1		Total
<10	Count	9
	Percent	18.0%
11-20	Count	23
	Percent	46.0%
>20	Count	18
	Percent	36.0%
Total	Count	50
	Percent	100.0%

Table 2:- It states 82% Pediatrician’s agree that they do consider oral hygiene practice as a part of general health education for the patient. (Chi square 0.89 and p value 0.34).

Q2		Total
NO	Count	8
	Percent	16.0%
YES	Count	42
	Percent	84.0%
Total	Count	50
	Percent	100.0%

Table 3:- It states 68% Pediatrician’s do not examine teeth as a part of routine general examination. (Chi square 0.06 and p value 0.80).

Q3		Total
NO	Count	34
	Percent	68.0%
YES	Count	16
	Percent	32.0%
Total	Count	50
	Percent	100.0%

Table 4:- It states 76% Pediatrician’s believe tooth brushing should start below 1 year of age and only 8% believe it should start from the 6th month of life. (Chi square 5.37 and p value 0.06).

Q4		Total
<1 YR	Count	38
	Percent	76.0%
>1 YR	Count	8
	Percent	16.0%
6 MONTHS	Count	4
	Percent	8.0%
Total	Count	50
	Percent	100.0%

Table 5:- It states 72% Pediatrician’s prescribe sugar syrups and do not give any oral hygiene measures after to prevent caries and have no knowledge of sugar free syrups. (Chi square 0.06 and p value 0.79).

Q5		Total
Sugar free	Count	14
	Percent	28.0%
Sugar	Count	36
	Percent	72.0%
Total	Count	50
	Percent	100%

Table 6:- It states 66% Pediatrician’s do not refer children with special health care needs to a Pediatric dentist due to lack of knowledge about poor oral hygiene in these kids. (Chi square 0.015 and p value 0.90).

Q6		Total
No	Count	33
	Percent	66.0%
Yes	Count	17
	Percent	34.0%
Total	Count	50
	Percent	100.0%

Table 7:- It states 76% Pediatrician’s have knowledge of the side effects of inhaler therapy and advise adequate oral hygiene instructions to them. (Chi square 0.29 and p value 0.58).

Q7		Total
No	Count	12
	Percent	24.0%
Yes	Count	38
	Percent	76.0%
Total	Count	50
	Percent	100.0%

Table 8:- It states 70% Pediatrician’s do not refer a child with oral habits to a Pediatric Dentist instead they refer them to a Clinical Psychologist. (Chi square 1.58 and p value 0.20).

Q8		Total
No	Count	35
	Percent	70.0%
Yes	Count	15
	Percent	30.0%
Total	Count	50
	Percent	100.0%

Table 9:- It states 52% Pediatrician’s know the importance of the required treatment followed by antibiotic therapy. (Chi square 1.92 and p value 0.16).

Q9		Total
AB+RX	Count	26
	Percent	52.0%
RX	Count	24
	Percent	48.0%
Total	Count	50
	Percent	100.0%

III. DISCUSSION

It is a common agreement amongst American Academy of Pediatric Dentist (AAPD), American Academy of Pediatrics (AAP) and American Dental Association (ADA) that early dental screening is the key to improve infant oral healthcare and prevent caries [10].

THE ROLE OF PRIMARY MEDICAL CLINICIANS IN ORAL HEALTH PROMOTION: Pediatricians, family doctors, and other primary care clinicians are best placed to promote children's oral health. In the early years of childhood, they also see babies and young children where prevention is essential and lifetime behaviors are developed. Family medicine is the largest primary medical care specialty in America, with 105,000 family doctors offering care for more than one-third of children in America, particularly in rural and underserved areas. General Pediatrician, number 45 000, delivers services for a large cross-section of infants. Primary care professionals may further reduce oral health inequalities through obtaining the expertise to administer oral tests, applying prevention treatments, advising caregivers, and properly referring patients to dentists⁴.

Dental caries impact 80 percent of the world's population and about a quarter of untreated caries in US adults. Dental caries are expensive dental services and impact general well-being adversely. The most significant risk factor for dental cavities is dietary free sugars. The WHO has released guidance advising that 10 percent of energy consumption should be generated by the intake of free sugars and proposing further decreases to <5 percent of energy in order to protect dental health during life. These guidelines were advised by a comprehensive analysis of data related to the risk of sugar levels and dental caries, which revealed evidence of moderate quality from cohort trials that minimized but did not eradicate dental caries by reducing free sugars to 10% of energy. Also, small amounts of childhood dental caries are of interest because caries are a progressive and cumulative lifelong condition⁵.

¹²Overwhelmingly, Pediatricians agree that they have an important role in improving oral health. Lack of awareness of oral health problems will make it difficult for them to endorse the prevention of dental caries. Additional oral health-related training in Pediatric residency may be suggested considering the frequency at which pediatricians experience dental caries. The Indian Society of Pediatric and Preventive Dentistry (ISPPD) also aims to achieve this aim with the motto "Every child has the fundamental right to his or her total oral health". The AAPD agrees that one of the pillars on which preventive education and dental care must be founded is infant oral health, in order to increase the potential for a lifetime free from preventable oral disease. It recommends guidelines to be adopted by dental, medical, nursing, and allied health professional services for prevention measures, oral health risk assessment, anticipatory guidance and therapeutic interventions. It also notes that dental-carries risk assessment should be a regular component of periodic risk assessment based on a child's age, biological factors, protective factors, and clinical findings^{6,7,12}. For all children at both the Pediatrician's and dentist's offices, emphasis on primary and secondary preventive oral health should be optimum^{8,13}. Each specialty has a benefit that allows them to give young children particular attention to certain aspects of oral health. Early relationships with patients and their parents are built by Pediatrician's and they are reliable sources of preventive advice starting from birth, while dentists are uniquely qualified to provide definitive dental disease care^{9,13}. The 2 specialties need to work collaboratively to ensure that the oral health needs of all of their patients are met. Such an ideal oral health care system requires further integration of oral health into medical school, Pediatric residency and continuing medical education curriculums, appropriate resources, better communication between Pediatric dentists and Pediatrician's, and changes to our health care financing and insurance structure so all children have equity in accessing dental care.

IV. CONCLUSION

More communication between the Pediatrician and the Pediatric dentist can help control the prevalence of dental caries in children and provide them with full optimal health and improve the quality of life.

RECOMMENDATIONS

- Pediatrician's role should have proper information on oral health care, and must be able to motivate the parents and the child with adequate knowledge.
- Improved communication should be developed between Pediatrician's and Pediatric dental clinics.
- Collaborations between Pediatrician's and Pediatric Dentist need to be promoted to improve the oral health care.
- A well-established referral system should be structured in every hospital to improve dental care for children.
- Pediatrician's need to be educated to perform oral health risk assessment and manage emergency situations.

REFERENCES

- [1]. Shinde PP, Shetiya SH, Agarwal D, Mathur A. Knowledge, attitude, and practice about infant oral hygiene care among Indian professional working mothers: A questionnaire study. *J Indian Assoc Public Health Dent* 2018; 16:58-61.
- [2]. Hale KJ. Oral health risk assessment timing and establishment of the
- [3]. dental home. *Pediatrics*. 2003;111(5 pt 1):1113–1116.
- [4]. Crall JJ, Krol DM, Lee JY, et al. Policy Statement. Preventive oral health intervention for pediatricians. *Pediatrics*. 2008; 122:1387–1394.
- [5]. D Alan, D Joanna. Educating Pediatricians and family physicians in children's oral health. *Academic Pediatrics* 2009; 9:452–6.
- [6]. P Moynihan. Sugars and Dental Caries: Evidence for Setting a
- [7]. Recommended Threshold for Intake. *American Society for Nutrition. Adv Nutr* 2016; 7:149–56.
- [8]. Available from: www.isppd.org
- [9]. American academy of Paediatric dentistry. Clinical guidelines. Guideline on Infant Oral Health Care. *Pediatr Dent Reference manual* 36(6/14/15) :141–145.
- [10]. American academy of Paediatric dentistry. Reference manual: Guideline on caries-risk assessment and management for infants, children and adolescents. *Pediatr Dent*. 2013;35(5): E157.
- [11]. Lewis C, Boulter S, Keels M, Krol D, M Wendy, Q Rocio. Oral Health and Pediatricians: Results of a National Survey *Academic Pediatrics* 2009; 9:457–61.
- [12]. Section on Pediatric Dentistry Preventive Oral Health Intervention for Pediatricians. *Pediatrics*. 2008;122(6):1387–1394.
- [13]. Brown A, Lowe E, Zimmerman B, Crall J, Foley M, Nehring M, et al. Preventing early childhood caries: Lessons from the field. *Pediatr Dent* 2006; 28:553-60.
- [14]. Kanika Singh Dhull, MD Indira, B Nandlal. "Knowledge, Attitude and Practice toward Infant Oral Healthcare among the Pediatricians of Mysore: A Questionnaire Survey", *International Journal of Clinical Pediatric Dentistry*, 2015.
- [15]. Charlotte W. Lewis, Suzanne Boulter, Martha Ann Keels, David M. Krol, Wendy E. Mouradian, Karen G. O'Connor, Rocio B. Quinonez. "Oral Health and Pediatricians: Results of a National Survey", *Academic Pediatrics*, 2009.