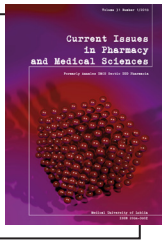
DOI: 10.1515/cipms-2018-0030

Curr. Issues Pharm. Med. Sci., Vol. 31, No. 3, Pages 154-156

Current Issues in Pharmacy and Medical Sciences

Formerly ANNALES UNIVERSITATIS MARIAE CURIE-SKLODOWSKA, SECTIO DDD, PHARMACIA

journal homepage: http://www.curipms.umlub.pl/



The role of paediatricians in the prophylaxis of early childhood caries

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ARTICLE INFO

Received 27 March 2018
Accepted 19 April 2018

Keywords:
early childhood caries (ECC), prophylaxis, paediatrician.

ABSTRACT

The first visit to the dentist should take place within 6 months after the first deciduous tooth erupts, and not later than in the 12th month of the child's life. To assess the role of paediatricians in the prophylaxis of early childhood caries, the authors studied recommendations given to parents about the age when their child should see the dentist for the first time. The survey covered 250 parents of children aged from 11 to 69 months who attended nursery schools and kindergartens in Lublin. Our results show that paediatricians only referred 12.80% (n = 32) of all children at the age of between 3 to 66 months for their first visit to the dentist. Herein, half of the references were of children younger than 2 years (Me = 24.0). In total, the mean age of the child was 22.41 ± 13.24 months on reference.

Thus, paediatricians refer children to the dentist for their first visit too seldom and too late. It is essential that paediatricians learn to participate to a greater extent in the prevention of early childhood caries. The cooperation between the paediatrician and the dentist is necessary to provide complex and comprehensive care to developmental age patients.

INTRODUCTION

According to the recommendations of the American Academy of Pediatric Dentistry (AAPD), the first visit to the dentist should take place within 6 months after the first deciduous tooth erupts, and not later than in the 12th month of the child's life [1]. After an interview and physical examination, the child's parents should be informed about caries risk factors and discuss an individual prophylactic-therapeutic strategy based on the evaluation of caries risk. Because parents regard paediatricians as an authority and visit them with their infants and children at the nursery and kindergarten age more often (8-12 consultations a year), and also because early childhood caries (ECC) is widespread, doctors are recommended to make parents aware of the necessity to arrange an adaptation visit of their child to a dental office [2,3].

AIM

The aim of the study was to evaluate the participation of paediatricians in the prophylaxis of early childhood caries.

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MATERIAL AND METHODS

The questionnaire survey was performed among 250 parents of children aged from 11 to 69 months who attended day nurseries and kindergarten in Lublin. Half of the studied parents' children were under the age of 4 (Me = 48 months), while the mean age of the child in this study was 45.33 ± 14.28 months.

The parents were asked about the gender and age of their child, whether during their consultation with the paediatrician, the doctor had recommended the child's first visit to the dentist, and at what age such a visit had actually taken place. The respondents also answered (yes/no) to the question whether their children suffered from early childhood caries.

The results obtained from the survey were statistically analyzed with STATISTICA 10.0 software. Appropriate descriptive statistics and statistical tests were used. In the paper, 5% error risk was assumed, and, consequently, in the case of significance level $p < 0.05$, the differences were regarded as statistically significant.

RESULTS

Among the children of the surveyed parents, 54.0% (n = 135) were girls at the age from 18 to 68 months. Half of these children were not older than 4 years (Me = 48.0),

while the mean age was 44.72 ± 13.47 months. The boys of this survey were 46.0% (n = 115) of all the children of the surveyed parents, and their age was between 11.0 and 69.0 months, the mean age being 45.84 ± 14.96 months (Fig. 1).

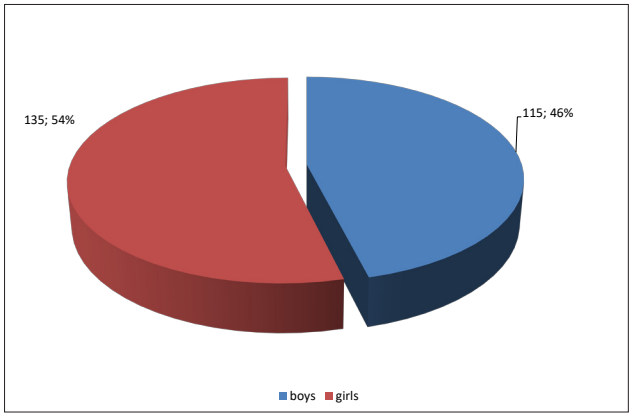

Figure 1. Study group characteristic according to gender

12.80% (n = 32) of all children aged from 3.0 to 66.0 months were referred by the paediatrician to the dentist for their first visit. Half of the children were not older than 2 years (Me = 24.0), and their mean age was 22.41 ± 13.24 (Fig. 2).

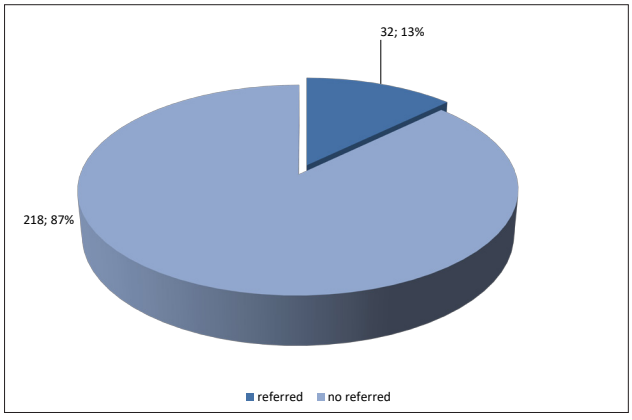

Figure 2. Study group characteristic according to reference by the paediatrician for first dental visit

The frequency of early childhood caries was 67.41% in boys and 62.61% in girls, and did not differ in a statistically significant way (Pearson's Chi^2 test = 0.63; df = 1; p = 0.43) (Fig. 3).

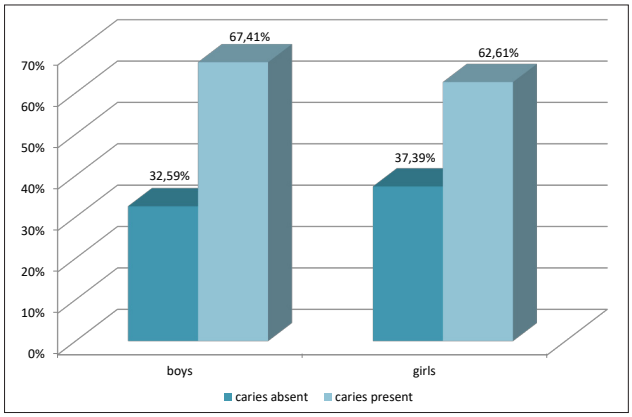

Figure 3. The presence of early childhood caries in children of the surveyed parents – according to the child's gender

No statistically significant relationship was found between early childhood caries and the paediatrician's recommendation concerning the child's first dental visit (Pearson's Chi^2 test = 0.20; df = 1; p = 0.65) (Fig. 4).

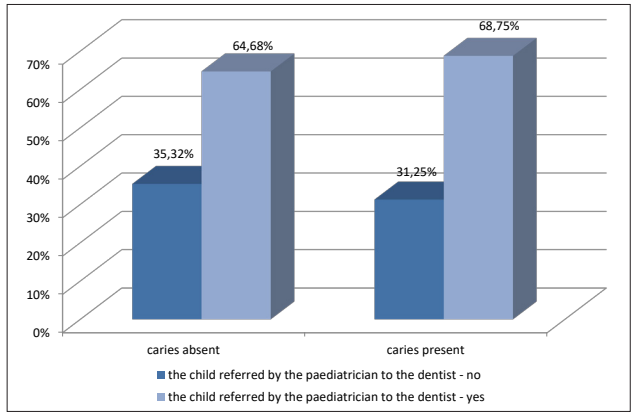

Figure 4. The presence of early childhood caries in children of the surveyed parents according to the child being referred by the paediatrician to the dentist

DISCUSSION

An early beginning of routine general dental examinations is a key factor in improving the health status of the oral cavity in children at the nursery and kindergarten age, and in preventing early childhood caries [3]. However, mistaken beliefs about the correct time when regular check-up visits should start are widespread. This is confirmed by recent Polish studies. Herein, almost 17% surveyed parents of children aged 2-5 years from the Małopolska Province did not take their child to the dental office for an adaptation visit [4], while 40% of all the surveyed parents of children aged 3-6 years, resident in the Wołomin municipality, did so. However, 8% of all parents believed their child to be too young to see the dentist [5].

Studies show that the mean age of children at their first visit is 2.9 ± 1.3 years. Furthermore, most mothers come with their child to see the dentist when the child is 3 years old (24%), 11.6% – when the child is younger than one year, and 19% – before the child is 2 years old [6].

In England, despite recommendations, 80% of all surveyed children did not make their first dental visit between their first and second years, and 60% of all children did not do so between their first and fourth years [7]. The mean age of the child referred to the dentist was 22.4 ± 13.24 months, the children being older than it is recommended by AAPD.

In turn, an Indian study indicates that only 5% of all paediatricians recommended a first dental visit to 6-month old infants [8]. At the same time, 11.5% of all paediatricians in Lebanon and 64% of all paediatricians in Brazil recommended a first dental visit in the first year of children's age, while 84% did so in the third year [9,10]. Seeing the dentist for the first time only in case of problems is recommended by 34% of all surveyed Polish paediatricians and almost 79% of all paediatricians in India [8,11]. The first dental visit with a child aged 2 years is recommended by only 29% of all questioned paediatricians in Poland [11].

Caries risk is not unchanging. Despite this fact, over half of all paediatricians (63%) do not see the need of seeing the dentist by children with low caries risk before their third year of age. Simultaneously, over 90% of all paediatricians and family doctors recommended a dental consultation to a high-caries risk child as soon as possible [12].

A comparison of the medical Expenditure Panel Survey data showed that 89% of all infants and one-year old children saw the paediatrician for a control visit, but only 1.5% went on an adaptation visit to a dental office. Thus, the calculated ratio of paediatric visits to dental visits was 250:1. Indeed, a study carried out in Lublin showed that most parents do not come to see the dentist before their child is 2 years old [13]. Despite the guidelines, 16.2% of all children aged 3-5 years and 22% of all children aged 4-6 years did not see the dentist [6,14]. Elsewhere, the situation is the same. In the United Arab Emirates, 26% of all those in early childhood never saw the dentist [15].

In contrast, almost half of all surveyed American family physicians and paediatricians agree or decidedly agree on the necessity of a general dental check-up in children to diagnose deciduous teeth caries [12]. At the same time, paediatricians perceive the need to actively participate in the prophylaxis of early child caries and are willing to broaden their knowledge on the evaluation of caries risk in children [11,16,17].

CONCLUSION

An American report issued by the Preventive Services Task Forces showed only a partial effectiveness in the referring of kindergarten-age children to the dentist by first care physicians [18]. Our study confirmed that paediatricians refer their patients to the dentist for the first visit too seldom and too late. It is, hence, essential that paediatricians learn to participate to a greater extent in the prevention of early childhood caries. The cooperation between the paediatrician and the dentist is necessary to provide complex and comprehensive care to developmental age patients [3,19].

REFERENCES

1. AAPD. Guideline on infant oral health care. Pediatr Dent. 2012; 34(5):148-52.
2. Krol DM. Educating pediatricians on children's oral health: past, present, and future. Pediatrics. 2004;113(5):487-92.
3. Brickhouse TH, Unkel JH, Kancitis I, Best AM, Davis RD. Infant oral health care: a survey of general dentists, pediatric dentists, and pediatricians in Virginia. Pediatr Dent. 2008;30(2):147-53.
4. Kargul A, Koperny M, Bała M, Seweryn M, Wiercińska E. Ocena stanu wiedzy na temat czynników wywołujących chorobę próchnicową oraz metod jej zapobiegania na podstawie badania ankietowego wśród rodziców dzieci w wieku przedszkolnym. Dent Med Probl. 2015;52(3):316-23.
5. Skonieczna J, Jankowska M, Olejniczak D, Boratyński W. Zachowania higieniczne dzieci w wieku przedszkolnym w ocenie rodziców. J Educ Health Sport. 2015;5(9):109-16.
6. Marcinkowska U, Piekarz T, Mosler B, Michalak E, Jośko-Ochojska J. Wybrane elementy profilaktyki próchnicy zębów dzieci w wieku przedszkolnym. Dent Med Probl. 2013;50(1):52-6.
7. 80% of 1 to 2-year-olds didn't visit an NHS dentist last year. The Royal College of Surgeons of England. 2017. Available from: https://www.rcseng.ac.uk/news-and-events/media-centre/press-releases/toddler-dental-vist-story/ [Accessed 14.03.2018].
8. Peedikayil FC, Kottayi S, Kenchamba V. Knowledge, attitude and practices of pediatricians regarding prevention of dental caries. Health Sci. 2013;2(2):JS002
9. Balaban R, Aguiar CM, da Silva Araújo AC, Dias Filho EB. Knowledge of paediatricians regarding child oral health. Int J Paediatr Dent. 2012;22(4):286-91.
10. Noueiri B, Nassif N, Bacho R. Behavior of Lebanese pediatricians regarding children's oral health. Int J Clin Pediatr Dent. 2017;10(4): 379-83.
11. Emerich K, Wyszkowski J. Profilaktyka chorób jamy ustnej w świadomości polskich pediatrów. Dent Med Probl. 2009;46(2): 157-61.
12. Ismail AI, Nainar SM, Sohn W. Children's first dental visit: attitudes and practices of US pediatricans and family physicians. Pediatr Dent. 2003;25(5):425-30.
13. Kubić-Filiks B, Rosiak J, Szalewski L, Pietryka-Michałowska E, Szymańska J. Socio-medical analysis of patients aged 0-6 years reporting to the dentist. Pol J Public Health. 2016;126(1):24-7.
14. Rudnicka J, Kowalczyk K, Ganowicz E, Iwanicka-Grzegorek. Czynniki warunkujące zdrowie jamy ustnej u dzieci w wieku przedszkolnym. Stomatol Współcz. 2015;22(1):8-15.
15. Kowash MB, Alkhabuli JO, Dafaalla SA, Shah A, Khamis AH. Early childhood caries and associated risk factors among preschool children in Ras Al-Khaimah, United Arab Emirates. Eur Arch Paediatr Dent. 2017;18(2):97-103.
16. Di Giuseppe G, Nobile CG, Marinelli A, Angelillo IF. Knowledge, attitude and practices of pediatricians regarding the prevention of oral diseases in Italy. BMC Public Health. 2006;6(1):176.
17. Lewis CW, Boulter S, Keels MA, Krol DM, Mouradian WE, O'Connor KG, Quinonez RB. Oral health and pediatricians: results of a national survey. Acad Pediatr. 2009;9(6):457-61.
18. Bader JD, Rozier GR, Lohr KN, Frame PS. Physicians' roles in preventing dental caries in preschool children: a summary of the evidence for the U.S. Preventive Services Task Force. Am J Prev Med. 2004;26(4):315-25.
19. Jadach R, Siwek-Jadach K, Migas-Mastalerz A. Rola lekarza rodzinnego w prewencji próchnicy zębów u dzieci i młodzieży. Fam Med Prim Care Rev. 2007;9(3):442-4.