



4TH ASEAN PLUS AND TOKUSHIMA JOINT INTERNATIONAL CONFERENCE

SECRETARIAT : FAKULTAS KEDOKTERAN GIGI UNIVERSITAS ISLAM SULTAN AGUNG
JL. KALIGAWA KM 4, SEMARANG

Assalamu'alaikum warahmatullahi wabarakatuh

Drg. Eko Sri Yuni Astuti

We present gratitude profusely for submitting your abstract entitled “**Caries Profile On School Children 6-12 Years Old In Denpasar In 2017**”. We are pleased to inform you that this has been selected for an Poster Presentation on Friday 1st December 2017 (exact time to be confirmed).

then we hope you:

1. Register and pay registration fee at the latest 15 November 2017
2. Sending proof of payment to email ijmtokushima@unissula.ac.id

For further information you can corresponding with us through this email or contact our poster competition committee

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Best Wishes,
Chairman of the Committee

Drg. Rudi Wigianto, PhD



CARIES PROFILE ON SCHOOL CHILDREN 6-12 YEARS OLD IN DENPASAR IN 2017

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ABSTRACT

Caries is a disease of hard tissue of the teeth which is occurring of multi factorials interaction and the damage begin on surface of the tooth (pit and fissure and proximal area as well), and can be spread to pulp. School children are children between 6-12 years of age. WHO, 2012 reveal that children 6-12 years old (school children) around the world have experience to caries of their teeth. The higher prevalence of caries was in Asia and Latin America. Many of studies said that Indonesia still high of caries on school children. In Denpasar didn't find accurate prevalence of caries data in age of school children, until 2015, there is not significant data of caries. The aim of this study was to know the caries profile of children 6-12 years old in Denpasar. The method of the study was descriptive with survey approach, and 480 respondents were involved in this study. The survey approach was done by using questionnaire as instrument for collecting data of supporting factor of caries risk. The results of this study refer to prevalence of caries of children 6-12 years of age reach 82.9 % and 17.1 % caries free, and the average of caries 4.5. The conclusion : the prevalence and average of caries on children 6-12 years old in Denpasar on 2017 was still high categorized. These caused by many factors, such as dietary of children, socioeconomic status of parents and behavior of parents to oral health.

Key words : caries profile, school children, children 6-12 years old.

INTRODUCTION

Caries occurred if there are interaction of four factors have to be happened and continued. If one of the factor is none, caries didn't occur.

About 92% age of preschool children and primary school children have dental caries. A study in several Europe, America and Asia, including Indonesia, 80% - 90% children under 18 years old affected dental caries. Risk assessment caries among the children based on caries indicators such as clinical condition, environment characteristic and the condition of general health. Socioeconomic status, dietary, oral hygiene and flour application as an indicator of the clinical condition. The dental caries index is clinically showing a dental caries, commonly used for the permanent teeth DMF-T index and def-t for primary teeth.

The children 6 - 12 years old are the children that get primary school of education and called as age group or school age. They are in a high risk category affected by the dental caries, because in this age, they like sweet meals, as candy, biscuit and chocolates.

Denpasar city is most populous city in Bali Province, the area around 12.778 ha. Denpasar city divided into 4 sub-districts, West Denpasar, East Denpasar, South Denpasar, and North Denpasar. The data collected from Denpasar Health Department in 2015, only the number of patient visits that affected by dental caries. This data did not use index caries such as DMF-t and def-t so they could not know the prevalence of dental caries specifically, especially in school children. The purpose of this research was to know the dental caries profile in children 6-12 years of age in Denpasar 2017.



Image : Interaction of four factors that caused caries

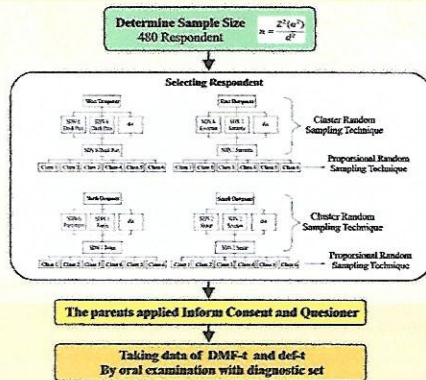


Image : School children



Image : Geographic of Denpasar City

METHOD

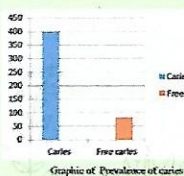


1. Prevalence of caries, 2. Average of caries, 3. Performed Treatment Index, 4. Required Treatment Index, 5. Chi Square test

RESULTS

The research of caries profile in children 6-12 years old in Denpasar city 2017 involved 480 respondent. Descriptive and survey approach used in this research. The results were :

A. Prevalence and average of caries

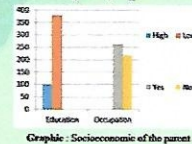


Graphic of Prevalence of caries

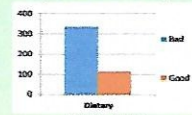
The prevalence of caries was 82,9 % and the average of caries was 4,5, it mean the level caries was high as WHO categorized. D/d > M/e > F/f, it mean the teeth which did not get treatment more than teeth get treatment.

N	Σ Respondent with caries	Σ Respondent free caries	Prevalence of caries (P)	Prevalence free caries (P)	Caries profile	Σ (DMF+def)	Average of caries (γ)
480	398	82	82,9%	17,1%	D 719 M 26 F 15 d 1182 e 188 f 7	2.137	4,5

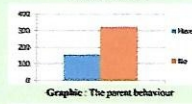
B. Survey by questioner



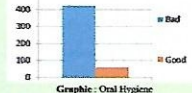
Graphie : Socioeconomic of the parent



Graphie : Dietary



Graphie : The parent behaviour



Graphie : Oral Hygiene

C. Chi-Square Test

Table 2 : Chi-Square Test for data of caries prevalence to risk factor of caries

Variable	Chi-Square	Asymp. Sig. (2-sided)
Prevalence and dietary	47,190	0,000
Prevalence and Oral Hygiene	47,190	0,000
Prevalence and socioeconomic	46,555	0,000
Prevalence and behavior health	46,555	0,000

Result of Chi Square analysis was gained significance value 0.000 (< 0.05), it concluded that risk factor such as socioeconomic, dietary, oral hygiene, the parent behavior influenced to caries prevalence.

D. Performed Treatment Index (PTI) and Required Treatment Index (RTI)

N	Index						PTI (%)	RTI (%)
	D	M	F	d	e	f		
480	719	26	15	1182	188	7	1,97	95

DISCUSSION

The caries prevalence in children aged 6-12 years at Government Primary School in Denpasar city in 2017 amount 82,9% with the caries average 4.5. It indicates each child has 4 to 5 caries teeth, it mean that the level caries was high as WHO categorized. The high caries prevalence and caries average caused by the supporting factors of caries, such as low parent socioeconomic status, bad dietary and parent awareness of oral and dental health.

The parent socioeconomic status, could be seen from parent education level and parent occupation. The level of education affected dental caries, the lower of parent education level, more children who have dental caries. Susi et al (2012), said that parents with undergraduate education level have dental caries more than parent with graduate education.

The second supporting factors caused caries was the bad dietary. The high of bad dietary in this study such as giving children a sweet snack, sticky foods and sweet drinks will affect the prevalence of dental caries. Budisuari research, et al (2010), sweet diet pattern affects the level of dental caries, more eating sweet food, there is a tendency for the more a tooth having caries.

The third supporting factors that caused caries was the parent behavior due to oral health of the children, such as knowing the dental health problems of the children and periodic control to the dentist. In this study the parent behavior due to oral and dental health of the children still low, this will affect the prevalence of caries. School-aged children are encouraged to perform routine checks to the dentist every 6 months because in this aged, they are in mixed dentition period. Routine dental check up aimed for early detection of dental caries and trained the children to avoid trauma in dental treatment.

Performed Treatment Index (PTI) still low, the low of parents education level allowed the lack of knowledge on oral and dental health of the children, so awareness of parents to take their children to the dentist was also less, consequently the children did not get the treatment on their teeth. It influenced Required Treatment Index (RTI).

CONCLUSION

The prevalence of caries of the children 6-12 years old in Denpasar city 2017 was 82,9 %. and the average of caries was 4,5, it mean that the level caries was high as WHO categorized. The risk factor such as socioeconomic, dietary, oral hygiene, and the parent behavior influenced to caries prevalence. This condition determined necessity to the treatment still high.

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PROGRAMME And PROCEEDING BOOK

THE 4TH ASEAN PLUS AND TOKUSHIMA JOINT INTERNATIONAL CONFERENCE “CHALLENGE AND INNOVATION IN ORAL SCIENCE”

Organized by,

Faculty of Dentistry
Universitas Islam Sultan Agung
Semarang, Indonesia



Faculty of Dentistry
Tokushima University
Tokushima, Japan



Prama Sanur Beach Hotel, Bali, Indonesia
December 1th - 3rd, 2017

Programme And Proceeding Book

The 4th ASEAN Plus and Tokushima Joint International Conference On " Challenge and Innovation in Oral Science"

Organized by

Collaboration,

Faculty of Dentistry Tokushima University

Faculty of Dentistry Sultan Agung Islamic University

Executive Editors : Eiji Tanaka, Suryono

Editor : Rudi Wigianto

Design & Layout : Arlina Nurhapsari

The 4th ASEAN Plus and Tokushima Joint International Conference
On " Challenge and Innovation in Oral Science"

Organized by
Faculty of Dentistry Tokushima University
Faculty of Dentistry Universitas Islam Sultan Agung

ISBN : 978-602-50288-1-6

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Caries Profile On School Children 6-12 Years Old In Denpasar 2017
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Poster 40

The Amount Of Osteoclasts On Mandible Of Wistar Rat Less Numerous After Consuming Fermented Kombucha Tea

Ni Wayan Arni Sardi

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Background: Alveolar bone loss is common in periodontitis cases. More number of osteoclasts in bone resorption may lead severe bone loss. The presence of oxidative stress effects on osteoclasts differentiation and function as well as its influence on the increase in bone loss. Reactive Oxygen Species (ROS) is an oxidant that take important roles in osteoclasts activation. Kombucha tea has antioxidant effects.

Objectives: This study was conducted to determine Kombucha tea fermented on 14 days make the osteoclasts in the mandibular bone of male wistar rat less numerous.

Methods: This research was a purely experimental method with Randomized Post Test Control Group Design. Subjects consisted of ten of three – month male wistar rats were divided into 2 groups. Control group received aquadest for 30 days, on the other hand the treatment group were treated by 8 ml of Kombucha tea for 30 days. On the 31st day, rats were euthanized for tissue sampling and histological preparation of mandibular bone was subjected for HE staining.

Result: The test results based on comparison between the control group and treatment group with independent t-test showed that there were significant differences in osteoclasts number in mandibular bone of wistar rat (p<0.05). Kombucha tea contain epicatechin gallate (ECG) that stimulate osteoblasts differentiation and induce induction of Receptor Activator Of Nuclear Factor- κ B Ligand (RANKL) in osteoclasts differentiation. Furthermore, Epigallocatechin gallate (EGCG) and theaflavin (TF) detoxify molecules of ROS and inhibit bone resorption in osteoclasts.

Conclusion: This study concluded that administration of Kombucha tea fermented on 14 days make osteoclasts in the mandibular bone of wistar rat less numerous.

Poster 41

Caries Profile On School Children 6-12 Years Old In Denpasar 2017

Eko Sri Yuni Astuti, Sulaksmi Atlindawati

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Background: Caries is a disease of hard tissue of the teeth which is occurring of multi factorials interaction and the damage begin on surface of the tooth (pit and fissure and proximal area as well), and can be spread to pulp. School children are children between 6-12 years of age. WHO, 2012 reveal that children 6-12 years old (school children) around the world have experience to caries of their teeth. The higher prevalence of caries was in Asia and Latin America. Many of studies said that Indonesia still high of caries on school children. In Denpasar district find accurate prevalence of caries data in age of school children, until 2015, there is not significant data of caries.

Objectives: The aim of this study was to know the caries profile of children 6-12 years old in Denpasar.
Method: The method of the study was descriptive with survey approach, and 480 respondents were involved in this study. The survey approach was done by using questioner as instrument for collecting data of supporting factor of caries risk.

Result: The results of this study refer to prevalence of caries of children 6-12 years of age reach 82.9 % and 17.1 % caries free, and the average of caries 4.5.

Conclusion: the prevalence and average of caries on children 6-12 years old in Denpasar on 2017 was still high categorized. These caused by many factors, such as diet pattern of children, social economic status of parents and behavior of parents to oral health.





Certificate

OF APPRECIATION

This certificate is presented to

Eko Sri Yuni Astuti, drg.,Sp.KGA

As

POSTER PARTICIPANT

Challenge and Innovation in Oral Sciences

4th ASEAN Plus and Tokushima Joint International Conference

Faculty of Dentistry Universitas Islam Sultan Agung

Prama Hotel, Sanur, Bali, Indonesia

December 1st - 3rd, 2017

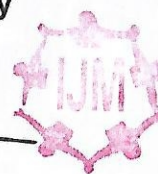


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STATUS TERAKREDITASI SK BAN PT NO. 237/SK/BAN-PT/Ak – XVI/S/1/XI/2013

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Nomor : K.1132/A.52.02/FKG-Unmas/XII/2017

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Untuk menghadiri acara The 4th Asean Plus and Tokushima Joint International Conference “Challenge and Innovation In Oral Science” sebagai peserta poster , pada tanggal 1-3 Desember 2017 di Prama Sanur Beach Hotel Bali.

Demikian surat tugas ini dibuat untuk dapat dilaksanakan sebaik-baiknya.

Denpasar, 1 Desember 2017

Dekan



Dr.drg.Dewa Made Wedagama,Sp.KG

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