Maternal Perception About Teething At The Lagos State University Teaching Hospital, Ikeja.

*Oyapero A

ABSTRACT

Teething is the process by which a tooth moves from its pre-eruptive position in the alveolar bone through the mucosa into its functional position in the oral cavity. Tooth eruption has however been held responsible for a variety of other unrelated systemic manifestations in infants. The aim of this study was to determine the maternal perception about teething at the immunization clinic of the Lagos State University Teaching Hospital, Ikeja (LASUTH).

This cross-sectional study was conducted at the immunization clinic of LASUTH. An interviewer administered questionnaire was used to obtain socio-demographic information of the mothers, as well as on maternal perception of teething symptoms and possible remedies. The most common systemic signs erroneously associated with teething were fever (88%), sleep disturbance, excessive crying at night (65.3%), diarrhea (52.8%), vomiting (48.6%), cough/catarrh (48.6%) and reduced appetite for liquid foods (43.1%). There was no significant association between the age of mothers and their educational status with perceived teething problems.

The commonest medication used by mothers for teething problems was Paracetamol syrup (79.2%). Many mothers also routinely used unsafe teething powders and mixtures for their infants. The inclusion of teething and its management as a topic in antenatal classes, in professional health programs and in continuing professional education for health professionals and childcare workers is strongly advocated to correct these wrong impressions.

INTRODUCTION

Teething is the process by which a tooth moves from its pre-eruptive position in the alveolar bone through the mucosa into its functional position in the oral cavity. The eruption of primary teeth usually begins around 4-8 months of age with the eruption of the lower incisors, and is complete at around 30-36 months of age when the second primary molars erupt.[1] Antigens from the oral cavity pass through the widened intracellular spaces of the oral epithelium into the deeper tissues as the tip of the

Correspondence: Dr. A. Oyapero
Email: fola_ba@yahoo.com
* Department of Preventive Dentistry, Lagos State University Teaching Hospital, Ikeja, Lagos.

cusp emerges, initiating an inflammatory response resulting in increased inflammatory cytokine levels within the altered connective tissue. This causes the observed signs and symptoms of inflammation called teething. Local signs include hyperemia of the mucosa overlying the erupting teeth, increased droolingand patches of erythema on the cheeks.[2] Teething may also cause infant restlessness, refusal of solid foods, fussiness, rubbing of the gums with fingers and a slight increase in temperature. Tooth eruption has however been held responsible for a variety of other unrelated systemic manifestations in infants.

The period of teething coincides with the timing of other normal developmental process such as the decline in maternal antibodies prior to the development of the infants own immunity, resulting in increased infections. The development of the infant's salivary glands at this same period contributes to constant drooling. The child also begins to crawl at this age and may introduce pathogens into the mouth which may cause gastrointestinal disturbances. Nocturnal awakening can result from the development of object permanence and attachment to parents. [3,4] Mothers, caregivers and health practitioners have however been unable to differentiate the symptoms associated with teething with other incidental or developmental events in the babies. This was reported by Swann, [5] who reviewed 50 children admitted to hospital with a presenting complaint of teething. In 48 of these children, a medical condition was diagnosed, including a case of bacterial meningitis.

Illingworth[6] made a thorough literature search and did not find any evidence that teething causes fever, convulsion, vomiting, body rash, bronchitis or diarrhea.[6] Tasanen in his study on 192 individual tooth eruptions, concluded that teething does not cause any significant rise in temperature, infections, cough, sleep disturbance, or rubbing of ear or cheek but it does cause day time restlessness, increase in finger sucking or rubbing of gums, drooling and loss of appetite. [7] Long held perceptions are however often difficult to change without appropriate health promotion interventions. Many of the historical misconceptions about teething and the related dangerous remedies persist.[8] The aim of this study was to determine the maternal perception and practices on teething at the immunization clinic of the Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos-Nigeria.

MATERIALS AND METHODS

Setting

This cross-sectional study was conducted at the immunization clinic of the Lagos State University Teaching Hospital, Ikeja from January 2012 to May 2012.

Sample

The sample included all mothers who had their babies enrolled for care at the immunization clinic of LASUTH during the period of study. The estimated sample size (n=71) was computed using results from a similar study in Nigeria with a prevalence value of 90%.[9]

The sample size was however increased to 144 to increase the power of the study.

Sample selection

A simple random sampling technique using the balloting method was employed in selecting the study participants. Those included were mothers who have had children or those who had only one child and whose babies have had at least 2 teeth erupted. The subjects were included in the study after explaining the nature of the study to them and obtaining their informed consent. Mothers who were unwilling to give their informed consent and those whose babies had started any form of dental treatment were excluded from the study. A total of 144 questionnaires were administered during this study period.

Data collection

An interviewer administered questionnaire was employed in obtaining information on the respondents' socioeconomic status. Demographic information such as gender, age, marital status, level of education, religion, educational qualification and occupation of the respondent was obtained. The perception of the mothers on teething symptoms and possible remedies was also obtained.

Data Analysis

Data were entered using Microsoft Excel software and analyzed using Statistical Package for Social Sciences (SPSS) version 20.

Frequency distribution tables were generated for all variables and measures of central tendency and dispersion was computed for numerical variables. Chi-square analysis was performed to determine whether certain categories of knowledge or attitudes the caregivers had about oral health were significantly associated with their socio-demographic variables. A 95% confidence interval and a 5% level of significance were adopted.

RESULTS

Subjects

A total of 144 mothers participated in the survey and majority (73.6%) were in the 26 -35 year old age group. Six (4.2%) mothers had no formal education, 10 (6.9%) had primary school education, 46 (31.9%) had secondary education, while 82 (56.9%) had tertiary education. Majority of the mothers (73.6%) worked full time and most of them (43.1%) had 2 children (**Table1)**

Maternal perception about teething problems

The most common systemic symptoms erroneously associated with teething were fever (88%), sleep disturbance and excessive crying at night (65.3%), diarrhea (52.8%), vomiting (48.6%), cough/catarrh (48.6%) and reduced appetite for liquid foods (43.1%). The only systemic symptoms correctly identified as not being associated with teething by a majority of the respondents was rashes on the whole body (64%). Teething signs

correctly identified by the majority were rubbing the gums with fingers and objects (86.1%), followed by slight body temperature increase (80.6%), drooling of saliva (80.6%) and increased biting (80.6%). There was poor knowledge about other teething symptoms/ signs. **(Table 2) Association between maternal perception about teething and socio-demographic variables**

There was no significant association between the age of mothers and perceived teething problems as shown in **Table 3**. There was a significant association between educational status and perception of rashes on the whole body as a teething symptom. (P=0.00). There was no significant association between the perceptions of systemic illness as teething symptoms on other questions asked even though respondents that were highly educated had better responses.

Management of teething problems

Table 4 displays the commonest medication and remedies used by mothers for teething problems were used were Paracetamol syrup (79.2%), teething powder containing Aspirin and Carbonate (50%) and teething syrup mixtures containing Paracetamol and Chlopheniramine (48.6%). The use of teething rings (23.6%), antibiotics 18.1%) and teething bracelets (15.3%) was practiced by only few respondents. Twenty five percent believed they should take their child to the hospital for teething- related symptoms. Other remedies mentioned by the respondents in the open ended section of the questionnaire were breastfeeding and herbal concoctions.

Table 1. Socio-demographic characteristics of the mother and child.

VARIABLE		Frequency	Percentage
Age category	16-25	12	8.3
	26-35	106	73.6
	36-45	26	18.1
Ehnicity	Yoruba	84	53.3
	Ibo	28	19.4
	Hausa	10	6.9
	Others	22	15.3
Working	Full time	106	73.6
	Part time	24	16.7
	Not at all	14	9.7
Religion	Christianity	132	91.7
	Islam	10	6.9
	Others	2	1.4
Education	None	6	4.2
	Primary	10	6.9
	Secondary	26	18.1
	Tertiary	102	70.8
No of children	1	60	41.7
	2	62	43.1
	3	10	6.9
	4	12	8.3
Total		**144**	**100%**

Table 2. Maternal knowledge and attitude about teething.

Teething is associated with the following signs and symptoms:	Number of respondents who agreed (%)	Number of respondents who disagreed (%)	Number of respondents who were unsure (%)
Increased biting.	116 (80.6%)	14 (9.7%)	14 (9.7%)
Drooling of saliva	116 (80.6%)	6 (4.2%)	22 (15.3%)
Rubbing the gum with fingers and objects	124 (86.1%)	8 (5.6%)	12 (8.3%)
Being easily irritated	98 (68.1%)	20 (13.9%)	26 (18.1%)
Wakefulness at night	80 (55.6%)	30 (20.8%)	34 (23.6%)
Rubbing the ears.	34 (23.6%)	60 (41.7%)	50 (34.7%)
Rashes on the face	24 (16.7%)	76 (52.8%)	44 (30.6%)
Reduced appetite for solid food	70 (48.6%)	40 (27.8%)	34 (23.6%)
Mild increase in body temperature	116 (80.6%)	16 (11.1%)	12 (8.3%)
Sleep disturbance and crying at night	94 (65.3%)	32 (22.2%)	18 (12.5%)
Excessive stooling	76 (52.8%)	48 (33.3%)	20 (13.9%)
Reduced appetite for liquid food	62 (43.1%)	44 (30.6%)	38 (26.4%)
Coughing and catarrh.	70 (48.6%)	38 (26.4%)	36 (25%)
Rashes on the whole body	28 (19.4%)	92 (64%)	24 (16.7%)
Fever	88 (61.1%)	38 (26.4%)	18 (12.5%)
Vomiting	70 (48.6%)	50 (34.7%)	24 (16.7%)

Table 3: Association between socio-demographic variables and knowledge of systemic signs

		Age category			Educational qualification			
	% with right responses	16-25	26-35	36-45	none	Primary	Secondary	Tertiary
Rashes on the whole body	Disagree	33.3%	60.8%	78.6%	3.1%	6.2%	12.5%	78.1%
		P= 0.343			P=0.00			
Reduced appetite for solid food	Disagree	12.7%	19.1%	42%	0%	5%	15%	50.4%
		P= 0.211			P= 0.06			
Sleep disturbance and excessive crying at night	Disagree	8.5%	67.9%	14.9%	4.3%	8.5%	19.1%	68.1%
		P= 0.327			P=0.06			
Diarrhoea	Disagree	7.9%	81.6%	10.5%	4.2%	4.2%	20.8%	43.6%
		P=0.214			P=0.293			
Coughing and catarrh	Disagree	8.6%	77.1%	14.3%	5.3%	0%	15.1%	78.9%
		P=0.743			P=0.039			
Fever	Disagree	9.1%	22.3%	25.9%	5.3%	10.5%	15.8%	28.4%
		P=0.893			P=0.210			
Vomiting	Disagree	5.7%	22.9%	47.2%	4.2%	4.2%	20%	72%
		P=0.225			P=0.011			

Table 4: Maternal practices on use of medication/ home remedies for teething

Which of following will you use to alleviate teething symptoms for your child?	Number of respondents who agreed (%)	Number of respondents who disagreed (%)	Number of respondents who were unsure (%)
Teething syrups mixtures	70 (48.6%)	52 (36.1%)	22 (15.3%)
Teething tablets	30 (20%)	80 (55.6%)	34 (23.6%)
Teething powder	72 (50%)	56 (38.9%)	16 (11.1%)
Paracetamol syrup	114 (79.2%)	12 (8.3%)	18 (12.5%)
Antibiotics.	26 (18.1%)	82 (56.9%)	36 (25%)
Teething rings	34 (23.6%)	74 (51.4%)	36 (25%)
Teething bracelets	22 (15.3%)	82 (56.9%)	40 (27.8%)
Take the child to the hospital.	36 (25%)	90 (62.5%)	18(12.5%)

Table 4: Maternal practices on use of medication/ home remedies for teething

Which of following will you use to alleviate teething symptoms for your child?	Number of respondents who agreed (%)	Number of respondents who disagreed (%)	Number of respondents who were unsure (%)
Teething syrups mixtures	70 (48.6%)	52 (36.1%)	22 (15.3%)
Teething tablets	30 (20%)	80 (55.6%)	34 (23.6%)
Teething powder	72 (50%)	56 (38.9%)	16 (11.1%)
Paracetamol syrup	114 (79.2%)	12 (8.3%)	18 (12.5%)
Antibiotics.	26 (18.1%)	82 (56.9%)	36 (25%)
Teething rings	34 (23.6%)	74 (51.4%)	36 (25%)
Teething bracelets	22 (15.3%)	82 (56.9%)	40 (27.8%)
Take the child to the hospital.	36 (25%)	90 (62.5%)	18(12.5%)

messages. The use of teething rings and other safe remedies for symptoms associated with teething should also be promoted.

CONCLUSION

Most of the mothers in this study erroneously ascribed the symptoms of systemic illnesses in their infants to teething. The inclusion of teething and its management as a topic in antenatal classes, in professional health programs and in continuing professional education for health professionals and childcare workers should be considered.

REFERENCES

1. Leung A. Teething. American Family Physician. 1989;39(2):131-4.
2. Tsang AKL. Teething, teething pain and teething remedies. Inter. Dentistry SA 2011; 12(5): 4861.
3. Gussy MG, Waters EG, Walsh O, Kilpatrick NM. Early childhood caries: current evidence for aetiology and prevention. J Paediatr Child Health 2006; 42(1-2):37–43.
4. Selwitz RH, Ismail AI, Pitts NB. Dental caries. Lancet 2007; 369(9555):51–9.
5. Swann IL. Teething complications, a persisting misconception. Postgrad Med J 1979;55:24–5.
6. McIntyre GT, McIntyre GM. Teething troubles? BDJ 2002; 192(5): 251-255.
Steward M. Infant care-teething troubles, Comm. Outlook 1988;1 : 27-28.
8. Markman L. Teething: facts and fiction. Pediatrics in Review. 2009;30 (8):59-64.
9. Gilbert N Adimorah Agozie C Ubesie Josephat M Chinawaet al.: Mothers' beliefs about infant teething in Enugu, South east Nigeria: a cross sectional study. BMC Res. Notes 2011; 4:228
10. Uti OG , KO Savage KO, Ekanem EE. Maternal beliefs about infant teething. Journ. Comm. Med. Pry. Health Care. June 2005; 17(1): 61-64.
11. Uzendu M, Udoh F. Nigeria: Paracetamol kills 25 kids.

http://www.allafrica.com/stories/printable/200811260698.html [Accessed on 2012 Oct].
12. Oshikoya KA, Senbanjo IO. Medicine turned poison for children in Nigeria. West African J Med 2010; 29: 278-279.
13. Beasley R, Clayton T, Crane J, et al. Association between paracetamol use in infancy and childhood, and risk of asthma, rhinoconjunctivitis, and eczema in children aged 6-7 years: analysis from phase three of the ISAAC programme. Lancet 2008; 372: 1039-1048.
14. Bakkeheim E, Mowinckel P, Carlsen KH, Håland G, Lødrup Carlsen KC. Paracetamol in early infancy: the risk of childhood allergy and asthma. Acta Paediatr 2011; 100: 90-96.