



ISSN: 0976-3376

Available Online at <http://www.journalajst.com>

ASIAN JOURNAL OF
SCIENCE AND TECHNOLOGY

Asian Journal of Science and Technology
Vol. 11, Issue, 02, pp.10757-10760, February, 2020

RESEARCH ARTICLE

ORAL HEALTH IN PREGNANCY

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ARTICLE INFO

Article History:

Received 25th November, 2019

Received in revised form

19th December, 2019

Accepted 07th January, 2020

Published online 28th February, 2020

Key words:

Pregnancy,
Oral hygiene,
Awareness,
Counseling.

ABSTRACT

Aim: A randomized study of oral problems in antenatal women attending department of OB&G of Anil Neerukonda Hospital, Sangivalasa. Most of the women who are registering for antenatal care are from rural areas in and around Sangivalasa. The study is to compare various oral problems in women from rural and urban areas. Urban candidates are selected from antenatal out-patient department of Apoorva hospital which is situated in Visakhapatnam city. This study is to identify the problems, for counseling, and advise and referral to dental specialist where ever required. Awareness of methods regarding oral hygiene and practice were insisted as pregnancy is a teachable moment about appropriate dental care. Untreated cavities in mother may increase the risk of caries in children. The opportunity is taken to educate the women regarding proper care of caries.

Citation: Dr. Surya Prabha, V., Dr. Krishnamma, B S. and Dr. Yellapu Laxmi Aparna, 2020. "Oral health in pregnancy.", *Asian Journal of Science and Technology*, 11, (02), 10757-10760.

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INTRODUCTION

Pregnancy affects nearly every aspect of a woman's health, including her oral health. The pregnancy is a physiological condition proper for health counseling. The number of visits women make to hospital is more for regular antenatal check-up. The reasons being level of progesterone can be 10 times higher than normal in pregnancy. This may enhance growth of certain bacteria that cause gingivitis. Immune system may work differently during pregnancy. This could change the way body reacts to the bacteria that cause gingivitis. The special oral health concerns of pregnant women are Pregnancy Gingivitis, Pregnancy Granuloma (Pyogenic Granuloma or Angiogramuloma or Pregnancy Tumor (2- 10 % incidence), Tooth erosion, gum hypertrophy, dry mouth, Ill-fitting crowns and dentures, loose tooth, aphthous ulcers, pyogenic granuloma, gingival recession, periapical abscess, dental caries, Epulis. Untreated conditions, if not identified and treated early may cause oral problems during pregnancy and they may contribute to preterm or low birth weight deliveries. Exposure to nutrients and secretions make mouth suitable for various organisms which include streptococci, lactobacillus, staphylococcus, Corynebacterium, Bacteriodes and streptococcus salivarius.

The activity of these organisms increases in pregnancy due to hormonal changes. Of the organisms, the incidence of Prevotella intermediate is higher as during pregnancy it uses progesterone as source of nutrition. Age and demographic distribution showed a cumulative effect on the oral health.

Effect of pregnancy on oral health: The prevalence of periodontal disease in pregnancy is associated with the levels of oral hygiene. Changes occur in oral cavity during pregnancy like pregnancy gingivitis, benign oral gingival lesions, tooth erosions, dental caries, periodontitis, tooth mobility, hypersalivation, dry mouth. Various changes seen are 1) oral mucosal pallor Pregnancy gingivitis (the inflammation of gums caused by bacterial growth which is enhanced by progesterone levels and grow on tooth causing plaque accumulation). This is due to altered body's response to bacteria in the plaque. 3) Tooth decay is due to repeated acid attacks on dental enamel due to morning sickness and is more during the first trimester. 4) Tooth mobility is due to hormone Relaxin which is mostly seen towards the end of pregnancy. 5) Aphthous ulcers may be due to stress and hormones (mostly estrogen). 6) Impaired collagen synthesis may also complicate gum hypertrophy and bleeding gums. 7) Pregnancy granuloma which is a growth on the gums also known as pyogenic granuloma in pre-pregnancy. The exact cause is unknown, although poor hygiene may be a risk factor. Pregnancy tumors are misnamed.

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They are not actually tumors and are not cancerous. They are not even dangerous, although they can cause discomfort. Pregnancy granulomas usually develop in the second trimester. They are red nodules, typically found near the upper gum line, but can also be found elsewhere in the mouth. These growths bleed easily and can form an ulcer or crust over. Pregnancy granulomas usually are attached to the gum or mucous membrane by a narrow stalk of tissue trauma, hormones, viruses and malformed blood vessels have also been suspected as co-factors. Women with these growths usually have widespread pregnancy gingivitis. 8) Hyper salivation is also seen. 9) Dryness of mouth due to dehydration of hyper emesis and medicines used for control of vomiting.

Effect of oral health on pregnancy: Oral disease is mostly caused by gram negative anaerobic bacteria capable of producing chemical inflammatory mediators like prostaglandins, interleukins, and tumor necrotic factor which can directly affect the pregnant woman. Studies that are comparable with our studies are Periodontal Disease, a chronic anaerobic inflammation that affects as many as 50 percent of pregnant women in the United States (Goepfert and co-workers, 2004). Vergnes and Sixou (2007) performed a meta-analysis of 17 studies and concluded that periodontal disease was significantly associated with preterm birth—odds ratio 2.83 (CI 1.95–4.10). In an accompanying editorial, Stamilio and colleagues (2007) concluded that the data used were not robust enough to recommend screening and treatment of pregnant women. To better study the relationship with periodontitis, Michalowicz and associates (2006) randomly assigned 813 pregnant women between 13 and 17 weeks with periodontal disease to treatment during pregnancy or postpartum. They found that treatment during pregnancy improved periodontal disease and that it is safe, but it did not significantly alter rates of preterm birth.

Periodontal infection may contribute to preterm birth or low birth weight babies. Adverse pregnancy outcomes included miscarriages and preeclampsia also. However, some studies showed that treatment of oral complaints doesn't prevent the incidence of pre- term and low birth weight babies. Secondly, untreated cavities in mother may increase risk of caries in children.

MATERIALS AND METHODS

This is a randomized prospective study conducted from 10-11-2019 to 30-01-2020. 100 rural antenatal women attending Anil Neerukonda Hospital of Sangivalasa and 100 urban women attending Apoorva clinic of Visakhapatnam were included. Pro-forma was prepared. Literate women filled them on their own and for uneducated women, assistance was given. Totally 200 women were interviewed and information of socio demographic conditions, personal, obstetric and dental history were obtained. A complete oral cavity examination for complaints like tooth erosion, granuloma, apical abscess, dry mouth, Aphthous ulcers, gingivitis, caries, Epulis was performed and results were tabulated.

RESULTS

The results in our study are comparable to other studies (Karunachandra N N, Perara IR, Fernando G Oral health status

during pregnancy: Rural-urban comparisons of oral disease burden among antenatal women in Sri Lanka. Rural and Remote Health, 2012). Incidence of oral complaints is more in rural population than in urban population which is 45% and 28% respectively as depicted in Table.1. Out of all the problems, dental caries was more. Among all the oral complaints Aphthous ulcers are more among urban population and remaining complaints are more in rural population. As depicted in table.3 population belonging to age group 20-30 years is more effected in both urban and rural population. Multi gravida are more effected. A rural antenatal multi gravida belonging to low socioeconomic status of age group 20-30 years are most effected.

DISCUSSION

A randomized study of dental problems in antenatal women can be identified and focused on common diseases. The local changes occur in the oral cavity. These collective changes may pose various challenges in providing dental care for pregnant patients. The main salivary changes in pregnancy involve its flow, composition, pH and hormone levels. Therefore, Pregnancy gingivitis is a well-recognized entity. Pregnancy Gingivitis gums look redder and bleed when they brush their teeth. severe swelling and bleeding. They can start as early as the second month. The condition tends to peak around the eighth month. It often tapers off after the baby is born. Most common in the front of the mouth. The oral changes which are seen in pregnancy include gingivitis, gingival hyperplasia, pyogenic granuloma, and salivary changes. Understanding the physiologic changes of the body and the effects on oral of the dental radiation and the medications which are used in dentistry for the pregnant women, lactating mothers and the fetuses, is essential for management of the pregnant and nursing mothers.

Morning sickness is a common problem which is encountered by women, early in their pregnancies. Erosion for example of the enamel can easily be controlled by advising the patients to rinse their mouths thoroughly after vomiting, with a solution that contains sodium bicarbonate. Sodium bicarbonate neutralizes the acids and it prevents the damage which is caused by the residue which remains on the teeth which will be addressed during counseling. As Exposure to nutrients and secretions make mouth suitable for various organisms to grow therefore advice is given regarding diet to reduce reflex gastritis and tips for oral hygiene are insisted. Counseling regarding dental care can be done. To minimize the effects of pregnancy gingivitis, pregnant women area advised to practice good oral hygiene like brushing twice a day for at least two minutes each time, not to brush right away after vomiting, since the acid in the mouth will only help erode the teeth, floss every day, regarding type of mouth wash to be used, type of brush and method of brushing, care before and after food was given. Use of proper antimicrobial mouth rinse to control gum inflammation. As mouth washes containing alcohol will produce dryness of mouth. Combat dry mouth by drinking plenty of water and by using sugarless hard candies or gum to stimulate saliva secretion and keep mouth moist. Some dentists suggest using rinses that don't contain alcohol, but it is not clear whether alcohol-based rinses have a negative effect on pregnancy. Counseling was done for all these women to avoid junk foods and carbonated drinks. If a growth interferes with speaking or eating, need to have it removed before childbirth was informed.



Tooth with caries



Bleeding gums



Tooth with calculus



Periodontal abscess



Periodontitis



Gingivitis

COMPLAINT	RURAL	URBAN
Dental caries	20	11
Gingivitis	11	7
Periodontitis	8	5
Apthous ulcers	4	5
Epulis	1	-
Peri apical abscess	1	-
Peri apical granuloma	-	-

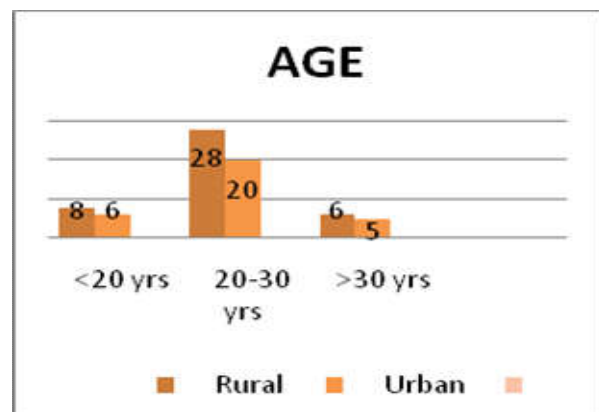
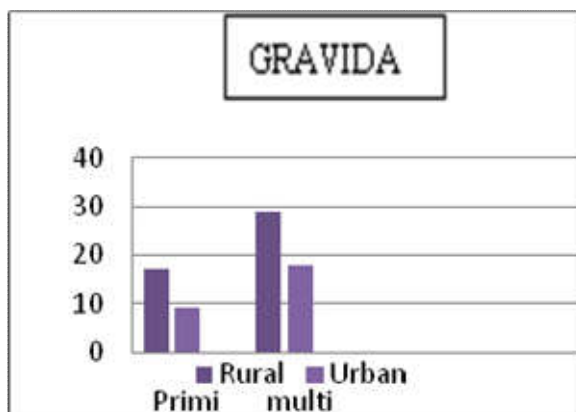
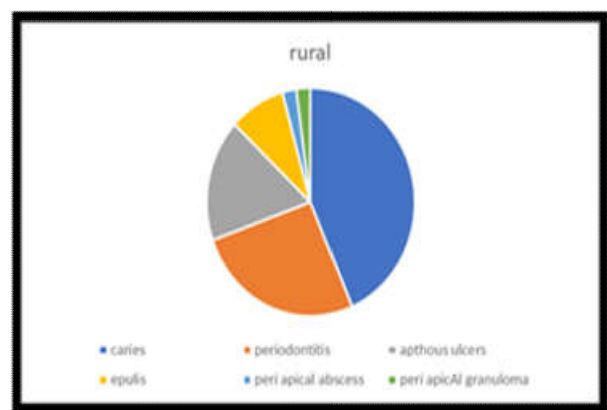
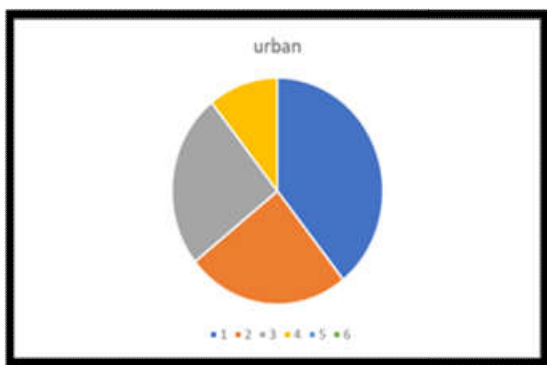


Table 2.

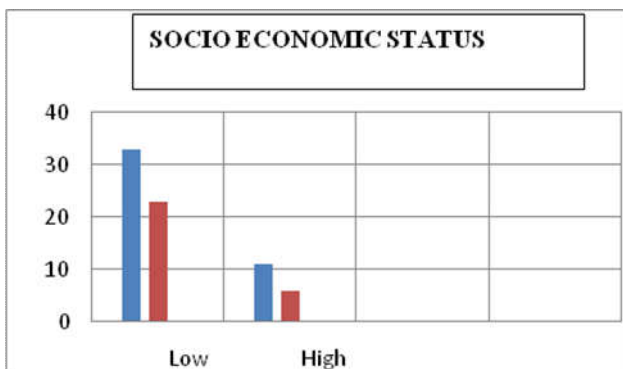
Gravida	Rural	Urban
Primi	17	9
Multi	29	18

Table 3.

Age	Rural	Urban
<20 yrs	8	6
20-30 yrs	28	20
>30 yrs	6	5

Table 4.

Socio economic status	Rural	Urban
Low	33	23
High	11	6



Recurrence, about half the time, after it has been removed during pregnancy is possible.

Teaching how to supervise child's brushing and to use to small amount of toothpaste, avoidance of saliva sharing behavior like sharing spoon while tasting baby food, wiping of infant's teeth with a soft cloth after feeding, to visit oral health care professional and get treated are some of the advices .

Conclusion

This is a healthy period and an opportunity to identify lesions early and prevent the complications for mother and fetus by health education, Advice for childcare regarding feeding and prevention of caries. Examination of the teeth and oral hygiene which are included in the routine antenatal profile should be meticulously followed.

Acknowledgements

Dr. Girish Karri, M.D.S. Apoorva hospital, Anil Neerukonda institute of Medical sciences. Anil Neerukonda institute of Dental sciences, Sangivalasa

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