Original Research Paper

Volume - 14 | Issue - 11 | November - 2024 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Periodontics

KNOWLEDGE AND AWARENESS AMONG GYNAECOLOGISTS ABOUT THE ASSOCIATION BETWEEN PERIODONTAL DISEASE AND PREGNANCY: A CROSS-SECTIONAL STUDY

Dr. Sarmistha Sritam	Post Graduate Student, Department Of Periodontics, Sri Siddhartha Dental College, Sri Siddhartha Academy Of Higher Education, Tumakuru
Dr. Praveen B. Kudva	Professor And Dean, Department Of Periodontics, Sri Siddhartha Dental College, Sri Siddhartha Academy Of Higher Education, Tumakuru
Dr. M. Anudeep Reddy	Post Graduate Student, Department Of Periodontics, Sri Siddhartha Dental College, Sri Siddhartha Academy Of Higher Education, Tumakuru
Dr Hema Puranik. A. R	Assistant Professor ,department Of Anatomy,sri Siddhartha Medical College, Sri Siddhartha Academy Of Higher Education, Tumakuru

ABSTRACT Pregnant women face increased risk of complications due to periodontal diseases, emphasizing the need for improved oral health awareness. Hormonal changes during pregnancy exacerbate oral health issues, including gingivitis and periodontitis. Gynaecologists play a pivotal role in educating patients on oral hygiene and preventing adverse outcomes. A study in India assessed gynaecologists' knowledge on periodontitis and pregnancy, revealing a need for enhanced interdisciplinary collaboration. Effective communication between medical and dental professionals is crucial for optimal maternal care. Standardized prenatal oral health protocols can mitigate risks associated with periodontal disease in pregnancy.

KEYWORDS : gynecologists, pregnancy, periodontal diseases, oral hygiene

INTRODUCTION:

The mouth is the mirror of general health conditions and also acts as a gateway for diseases to the rest of the body [1]. Oral health care during pregnancy period is a focus point of interest. It involves several substantial hormonal changes which has the major impact during the period of pregnancy [2]. Several oral health problems associated with pregnancy includes periodontitis, gingivitis and pregnancy granuloma [3-5]. Pregnant lady with periodontal diseases may be at a higher risk of pre-term birth/ low birth weight infant [6-7]. Periodontal disease is a chronic inflammatory condition with the destruction of the periodontal tissues and the bacterial plaque are the primary etiological factor responsible for the beginning of periodontal disease [8]. The periodontal homeostasis involves critical multi-factorial relationships, where the endocrine system is pivotal [9].

Periodontal diseases may be the risk factors for adverse pregnancy complications. Lack of awareness regarding oral health leads to neonatal mortality and preterm low birth weight among infants. Assessment of oral health care and referral pattern at the time of pregnancy by gynaecologists plays an important role in the prevention of adverse outcomes of pregnancy.

Aim and objectives: The present study was conducted to evaluate;

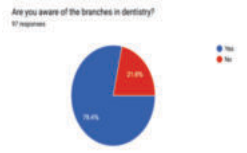
1. The knowledge, awareness of gynaecologists about periodontitis
2. Its association with pregnancy outcomes
3. To evaluate the referral pattern.

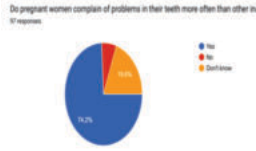
Methodology:

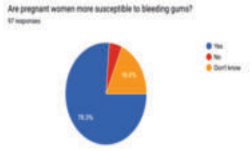
A cross-sectional study was conducted among gynaecologists practicing in different parts of India. Gynaecologists were briefed regarding the nature of the study. A total of 97 gynaecologists were willing to participate in the study. After obtaining consent from all participants, a validated questionnaire (Goriparthi et al; 2020) [10] was circulated individually and answers were collected online via Google form/ social media/ email etc. The study tool was a predesigned and pretested semi-structured schedule.

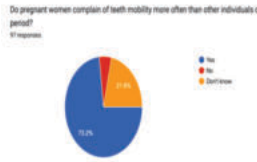
RESULTS:

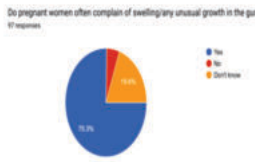
Questionnaire contains 19 questions to evaluate the gynecologist's attitude, awareness about the maternal oral health and referral pattern.

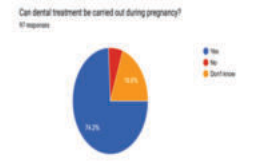


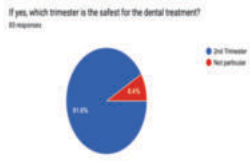


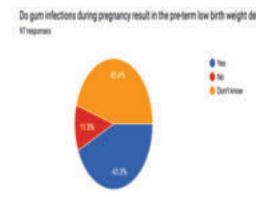


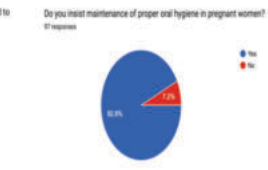


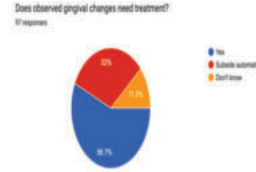


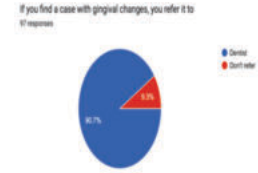


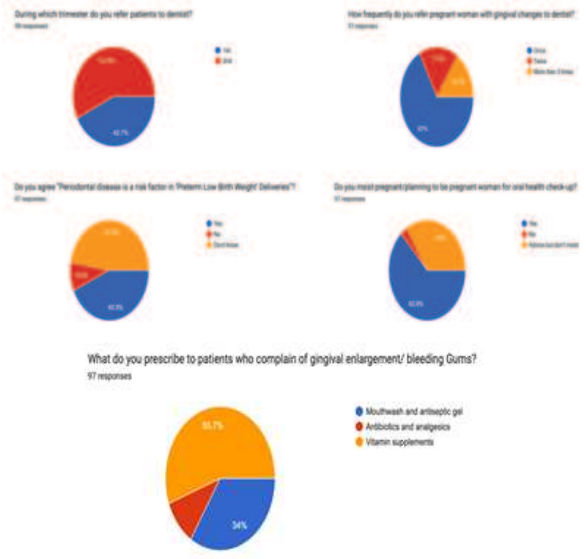












DISCUSSION:

The study was designed to assess the knowledge, awareness and referral patterns of gynecologists about maternal oral health and pregnancy outcomes. Data was collected from 97 gynecologists who were forwarded a questionnaire containing 19 questions related to attitude and awareness. Numerous studies have co-related the incidence of periodontal diseases during pregnancy. It has been well established that hormonal levels are increased during pregnancy resulting in an exaggerated inflammatory response. Pregnant subjects regularly visit gynecologists hence questionnaire consisted regarding knowledge and awareness of oral health during pregnancy.

78.4% gynecologists were aware about the branches in dentistry with 77.3% have knowledge that hormonal changes can lead to change in gingival tissue. Around 73.2% women complained regarding the problems in their teeth like tooth mobility, bleeding gums, swelling etc. Results are in accordance with **Louis et al (2014)** and **Raghad Hashim (2014)** where pregnant subjects had periodontal problems such as bleeding gums, mobility, swelling which they related to hormonal changes related to pregnancy. In the current study 74.2% gynecologists opinioned dental treatment can be carried out in pregnancy and almost 91.6% have agreed that treatment can be done in 2nd trimester. 43.3% gynecologists opinioned periodontal disease cause preterm birth in pregnancy. The results are in agreement by **Rocha et al (2011)**, **Amal – Al- Qahtani (2019)** and **Mi Nannan (2022)** who stated periodontal disease are risk factor for preterm birth or low birth weight babies. However, the current study have substantial 45.4% are unaware about the relationship. In the present study, 34% prescribed mouthwash, which indicated that they were attentive toward a patient's oral health. The results are in support with **Javali et al (2021)** and **Noora et al (2022).**

Adverse pregnancy outcomes present a major health concern to the health professionals in developed and developing countries regardless of the high level of public awareness and improvement in prenatal care. Preterm delivery and low birth weight constitute the common causes for neonatal morbidity and mortality. Preterm delivery is associated with risk factors such as smoking, alcohol consumption, race, parity, low maternal weight, older and younger maternal age, short cervical length, stress, low socioeconomic status, poor nutritional status of the mother, genitourinary infections, and other generalized systemic infections. Periodontitis, a chronic and subclinical disease, is also suspected for providing an inflammatory component in the fetal environment. During pregnancy, the incidence of gingivitis and periodontitis is increased and many pregnant women suffer from bleeding and boggy gums.

According to **Rocha et al, 2011**; over 80% of participating obstetricians reported smoking, preeclampsia, bacterial vaginosis and periodontal disease as risk factors or possible risk factors for preterm birth or low birth weight. They concluded that, though 875 obtestricians have a knowledge about association between gingival inflammation and adverse obstetric outcomes, the attitudes of these professionals were not in agreement with their apparent knowledge regarding periodontal diseases and their possible repercussions.

Sonali et al in 2012; divided 73 respondents in two groups Group A (doctors that practiced at a medical college or hospital) and Group B (doctors that practiced at private hospitals). They showed that most gynecologists were aware and concerned about female patient's oral health during various hormonal phases. However, gynecologists practicing at medical colleges and hospitals (Group A) had significantly greater health awareness than doctors practicing at private hospitals (Group B).

Louis et al in 2014; conducted a cross sectional study on 400 mothers using medical records, clinical examination and oral interview of mothers at the two tertiary health facilities. They found that approximately 26% and 29% of the postpartum mothers examined had bleeding gingiva and periodontal pockets of 4 mm or more deep, respectively. Advanced periodontitis i.e. pocket depth (≥ 6 mm) was recorded in 13 (3.6%) of the mothers. Calculus with plaque deposits were recorded in 86% (n = 343) of the mothers. Gingival recession was recorded in 9.0% of the mothers and significantly and directly related to birth weight.

CONCLUSION:

Gingival diseases are modified by systemic factors, which are associated with the endocrine system classified as puberty, menstrual cycle and pregnancy associated gingivitis [11]. Pregnant women should maintain proper oral hygiene because they are more prone to gingivitis and periodontitis which in turn affects the child's health. Gynaecologists treat the women with hormonal problems and pregnancy. It is their responsibility to educate them about the oral hygiene, which is very important for the maintenance of overall health. Gynecologists play a vital role in providing the primary health care during pregnancy. Hence, knowledge and awareness regarding interrelationship of periodontal disease and adverse pregnancy outcomes should be regularly updated among healthcare professionals. Medical and dental professionals should work synchronously for overall benefit of the patient.

REFERENCES

1. McCann AL, Bonci L. Maintaining women's oral health. Dent Clin North Am 2001;45(3):571-601.
2. Krejci CB, Bissada NF. Women's health: Periodontitis and its relation to hormonal changes, adverse pregnancy outcomes and osteoporosis. Oral Health Prev Dent 2012; 10(1):83-92.
3. Annan B, Nuamah K. Oral pathologies seen in pregnant and non-pregnant women. Ghana Med J 2005;39(1):24-7.
4. Page RC, Kornman KS. The pathogenesis of human periodontitis: An introduction. Periodontol 2000 1997;14:9-11.
5. American Academy of Periodontology. The Pathogenesis of Periodontal Diseases, Chicago: The American Academy of Periodontology; 1999.
6. Rai B, Kharb S, Anand SC. Is periodontal disease a risk factor for onset of preclampsia and fetal outcome? Adv Med Dent Sci 2008; 2:16-9
7. Patil, S. N., Kalburgi, N. B., Koregol, A. C., Warad, S. B., Patil, S., & Ugale, M. S. Female sex hormones and periodontal health-awareness among gynecologists–A questionnaire survey. The Saudi dental journal, 24(2), 99-104.
8. Löe, H. Periodontal disease: the sixth complication of diabetes mellitus. Diabetes care, 16(1), 329-334.
9. Mascarenhas P, Gapski R, Al Shammari K, Wang HL. Influence of sex hormones on the periodontium. Journal of clinical periodontology. 2003;30(8):671-81.
10. Sree GN, Jayasheela M, Vinayaka AM et.al. Knowledge and awareness among gynecologists in Davangere about the association between periodontal disease and pregnancy outcomes & referral pattern of pregnant woman to periodontists - a cross sectional survey. Int J Health Sci Res. 2020; 10(8):183-189.
11. Basha S, Shivalinga Swamy H, Noor Mohamed R. Maternal Periodontitis as a Possible Risk Factor for Preterm Birth and Low Birth Weight - A Prospective Study. Oral Health Prev Dent. 2015;13:537-44.
12. Rocha JM, Chaves VR, Urbanetz AA, Baldissera Rdos S, Rösing CK. Obstetricians' knowledge of periodontal disease as a potential risk factor for preterm delivery and low birth weight. Braz Oral Res 2011;25(3):248-54.
13. Nannan, M.; Xiaoping, L.; Ying, J. Periodontal disease in pregnancy and adverse pregnancy outcomes: Progress in related mechanisms and management strategies. Front. Med. **2022**, 9, 963956.