

Endodontic management of acute dental pain and oral health challenges among pregnant women in Pakistan

Comment [r1]: Kindly check the title, because is too long
Pay attention, the title doesn't match with the whole manuscript !!!!

Abstract

Introduction: Pregnancy is a state of physiological condition that brings about various changes in the oral cavity along with other physiological changes taking place throughout the female body. Gingival hyperplasia, gingivitis, pyogenic granulomas and various salivary alterations are some of the changes commonly witnessed among pregnant women. **Objectives of the study:** The main objective of our study is to find the endodontic management of acute dental pain oral health challenges faced by the pregnant women in Pakistan. Because like other systems of the body oral system also face many problems during pregnancy in women. **Methodology of the study:** A cross-sectional survey of pregnant women attending the Punjab Dental Hospital, Lahore during 2020 to 2021. Ethical approval was obtained from the concerned department of the hospital and ethical committee and written consent was obtained from all participants. A convenience sample of 100 pregnant women was invited to participate by a dental assistant. **Results:** We select 100 patients for our study and these are pregnant women who completed the survey. The mean age of the participants ranged from 16 to 40 years. More than half (59.3%) reported dental problems during pregnancy, less than a third (30.5%) saw a dentist in the last six months, only 10% had received any information about perinatal oral health and many (>50%) were unaware of the potential impact of poor maternal oral health on pregnancy and infant outcomes. **Conclusion:** The present study indicates that the oral health status is not appropriate among the pregnant women. On the other hand, the high prevalence of dental plaque, poor periodontal condition and unsatisfied treatment require a preventive population based strategy with an emphasis on the improvement of the oral self-care for the pregnant women.

Comment [r2]: Kindly try to introduce the acute dental pain , dental emergencies..., endodontic matters over here !!!

Comment [r3]: Remove that one and write it up in the introduction

Key words: Oral health, pregnancy, antenatal care, dental service

Introduction

Comment [r4]: Pay attention , you didn't recall here about endodontic diseases in pregnant women in the introduction !!!!
In this part of your manuscript try to write down some rates of occurrence of dental pain... in pregnant women
Give some deep informations from researches

Pregnancy is a state of physiological condition that brings about various changes in the oral cavity along with other physiological changes taking place throughout the female body.¹ Gingival hyperplasia, gingivitis, pyogenic granulomas and different salivary modifications are a portion of the progressions normally saw among pregnant women.² The part of elevated amounts of flowing estrogen is entrenched and connected with high pervasiveness of gingivitis and gingival hyperplasia.³ Progesterone in the serum is likewise observed to be related with melasma, introducing a two-sided pigmentation or darker fixes in the mid face region.^{3,4} Various investigations have discovered confirmation connecting together poor maternal oral wellbeing, pregnancy results and dental strength of the offspring.⁵ [These may extend from preterm conveyance and low birth weight to higher danger of early caries among newborn children. Lamentably, aside from self-upkeep of oral cleanliness, pregnant ladies confront a few different boundaries in accomplishing ideal oral health.^{6,7} These hindrances to looking for dental services incorporate absence of learning and esteem, negative oral wellbeing encounters, negative states of mind toward oral wellbeing experts and negative mentalities of dental staff toward pregnant women.⁸ Similarly, mistaken suspicions, absence of information or experience regularly assumes a part in the aversion appeared by dental specialists in giving dental care to pregnant women.² Oral wellbeing advancement, sickness avoidance, early recognition and convenient intercession are essential angles for maternal and youngster oral health.⁹ It is generally settled that numerous if not all standard and preventive dental techniques can be securely performed all through the time of pregnancy with specific precautions.^{4,10}

Objectives of the study

The main objective of our study is to find the endodontic management of acute dental pain and oral health challenges faced by the pregnant women in Pakistan. Because like other systems of the body oral system also face many problems during pregnancy in women.

Methodology of the study

A cross-sectional survey of pregnant women attending the Punjab Dental Hospital, Lahore during 2020 to 2021. Ethical approval was obtained from the concerned department of the hospital and ethical committee and written consent was obtained from all participants. A convenience sample of 100 pregnant women was invited to participate by a dental assistant. Surveys were administered by the dental assistant to all interested participants.

Comment [r5]: Granuloma gravidarium too

Comment [r6]: Exactly

Comment [r7]: These are some references which confirm this, but as you see they recall the association between the outcomes of pregnancy and periodontal diseases:

- Contreras et al. *Periodontitis Is Associated With Preeclampsia in Pregnant Women.* J Periodontol. 2006
- Chambrone et al. *Evidence grade associating periodontitis to preterm birth and/or low birth weight: I. A systematic review of prospective cohort studies* J Clin perio 2011
- Lauren et al. *The Impact of Periodontitis in the Preterm Birth and Body Size of Newborns.* Mat Soc Med. 2012
- Ide and Papapanou. *Epidemiology of association between maternal periodontal disease and adverse pregnancy outcomes – systematic review.* J Periodontol 2013

Comment [r8]: Kindly put down the reference here !!!!

Comment [r9]: Moreover prophylaxis and especially periodontal treatment may decrease negatives pregnancy issues as early birth and low birth weight of 57% AND 50% (RR: 0,45 et RR: 0.5) as described in the manuscript of xiong and offenbecher : periodontal disease and adverse pregnancy outcomes: a systematic review; BJOG 2006

Comment [r10]: The main objective of the study is too far and different from the introduction !!!!!

Comment [r11]: How do you do the select the sample and to calcul n=100?

Data collection

The survey administered was structured and contained items relating to oral health and care (including prevalence of dental problems), frequency of dental visits, barriers to seeking dental care, oral hygiene habits, perceptions of oral health, knowledge about oral health and access to dental care. Sociodemographic data including age, education, ethnicity, period of gestation, employment and household income were also collected.

Comment [r12]: Could you show us the survey or paper data collection?
The data collection should be approved by professionals

Data analysis

The survey data were analyzed using SPSS (Statistical Package for Social Sciences Version 17.0, 2008). Descriptive statistics such as mean and standard deviation for continuous variables and frequency and percentage for categorical variables were calculated and tabulated. Descriptive and inferential statistics such as the chi-square test was used to compare the profiles of pregnant women who had visited a dentist in the last six months with those who did not. The level of significance used was 0.05.

Comment [r13]: DO YOU MEAN $p=0.05$???

Analysis and Results

We select 100 patients for our study and these are pregnant women who completed the survey. The mean age of the participants ranged from 16 to 40 years. The majority were in the age bracket of 15–34 years (Table 1).

Comment [r14]: The mean is one value for example 25 ± 2 years, so try to calculate correctly the mean of all quantifiable variables !!!!

Table 1: Socio-demographics and obstetric characteristics of participants (n = 100)

Characteristics	Frequency (%)
Age (years)	
15–34	85.9
34–54	11.2
Highest qualification achieved	
No qualifications	46.1
Vocational college	30.7
University	22
Employment status at recruitment	
Working full-time	23.1
Working part-time	17.8
Not working	55.3
Average annual household income	

<\$40 000	20.54
\$40 000 to less than \$80 000	22
\$80 000 to less than \$120 000	23.45
Health Care Card	
Yes	19.5
No	7.3
Private Health Insurance	
Yes	28.9
No	71
Period of gestation	
1st trimester	2.9
2nd trimester	33.4
3rd trimester	67.5

More than half the participants (55.2%) were not engaged in employment and 46.1% had no formal qualifications. Over half the participants (52.3%) were from low to middle income families (<\$40 000 and \$40 000 – <\$80 000) and just over a third had health care cards. These figures are fairly consistent with population data from the area which show that 53.1% have no formal qualification and 33.2% have annual household income. The majority of women surveyed (62.7%) were in their third trimester and had other children (71%). status was average to good (75.5%) with just over half reporting at least one oral health problem during their current pregnancy (Table 2). The most common oral health problems reported by the 100 participants who gave information were bleedings gums, cavities, sensitivity and 50% reported that dental problems had sometimes or often affected both what they could eat and overall health in general.

Comment [r15]: Pay attention frequencies in the text don't match with the tables !!!!

Table 2: Perceived oral health status of pregnant women (n = 100)

Variables	Frequency (%)
Oral health status	
Excellent	10.9
Good	29.5
Average	48.2
Fair	7.8
Poor	5.1
Type of oral health problems	
Bleeding gums	60.1
Toothache	16.9
Cavities	3.1
Loose teeth	20.2
Sensitivity	41.6

Teeth that don't look right	15.1
Dental problems affected what to eat and overall health in general	
Never	50.1
Sometimes	41.8
Often	8.8

However, analysis of the individual knowledge items showed that pregnant women had inadequate knowledge about the potential impact of poor maternal oral health. Less than half the women were aware that dental decay could spread from the mother to the baby's mouth (47.5%) and that a mother's poor oral health may contribute to low birth weight (47.5%). It is also evident that some confusion exists among pregnant women regarding the appropriateness of accessing dental care both during pregnancy and early childhood. Nearly a third of pregnant women (32.5%) were unsure about the best time for a baby to have the first dental visit and 26.1% felt that dental treatment should be avoided during pregnancy unless it is an emergency (Table 3).

Table 3: Dental care of pregnant women (n = 100)

Variables	Frequency (%)	95% CI
When was the last time you saw a dentist?		
<6 months	30.5	24.7–36.3
6 to <12 months	15.1	10.6–19.6
1 yr to <2 yrs	24.7	19.3–30.1
2 yrs to <5 yrs	17.2	12.4–22.0
>5 yrs	10.0	6.2–13.8
Never visited	2.5	0.5–4.5
Barriers in seeking dental treatment		
Safety concerns regarding treatment during pregnancy	31.9	21.1–42.7
Dental costs	29.2	18.7–39.7
Time constraints	29.2	18.7–39.7
Oral health not seen as a priority	20.8	11.4–30.2
Advised by antenatal care providers not to seek treatment	4.2	0.4–8.8

How often do you brush?		
A few times a week	1.2	0.2–2.6
Less than once a week	1.2	0.2–2.6
Once a day	27.0	21.4–32.6
Twice a day	67.2	61.3–73.1
More than twice a day	3.4	1.1–5.7
Oral hygiene products used		
Flouride toothpaste	98.3	96.7–99.9
Mouthwash	40.7	34.5–46.9
Dental floss	42.7	36.4–49
Sugar free gum	35.7	29.7–41.7

The results showed a significant difference in the uptake of dental services among pregnant women who had higher household income, private health insurance, received information about oral health during pregnancy and knowledge about the impact of poor maternal oral health. The influence of other socio-demographic indicators such as education and employment on dental visits was not evident. Likewise, perceived oral health status, self-reported oral health problems and accessibility to dental care were not significantly different between the groups.

Discussion

This study provides the knowledge about oral health in pregnant women in Pakistan. One of the main reasons for poor maternal oral health is the hormonal variations and dietary changes that occur during this period which puts pregnant women at a higher risk of suffering various dental problems.¹¹ This is reflected in the findings with a higher prevalence of dental problems seen in the pregnant women than the general population. Exacerbating the situation is the limited number of women that actually seek dental advice during pregnancy even when a dental problem exists.⁷ The low uptake of dental services among pregnant women is well documented worldwide and is evident in Australia as well.^{12,15–18} The findings from this study show that only around 30% of pregnant women are utilizing dental services in Australia which is fairly consistent with previous reports of 30% to 36% from prenatal and postnatal surveys of women living in another city in Australia (Adelaide).^{13,14} The low utilization of dental services is of

Comment [r16]: Show us corresponding table and write down the frequencies or values ? the link between the uptake of dental service and higher income, private health insurance is not clear here !!!

Comment [r17]: The discussion should be more long

serious concern especially considering a number of pregnant women here reported that their dental problems had affected their diet and overall health in general. Having an inadequate diet and poor oral health during pregnancy can be detrimental to the health and well-being of the baby.³³ According to this study the low uptake of dental services during pregnancy can be attributed to a number of factors, one being the cost of dental services. The issue of cost was highlighted by close to 30% of study participants and comparison analysis showed that pregnant women with higher household incomes were more likely to seek dental treatment than those on lower incomes.

Comment [r18]: Check your bibliography !!!!! it doesn't exist !!!!

Another contributing factor to the low uptake of dental services is the lack of awareness among pregnant women about the importance of maternal oral health. Less than half the women surveyed were aware about the potential ill-effects of poor oral health during pregnancy, which could explain why 20% of the women did not view oral health as a priority. However, most participants did have good knowledge about oral hygiene habits which was reflected in their practices with more than two-thirds brushing twice a day and using fluoride toothpaste. The results of this study also revealed that pregnant women who consulted a dentist were more likely to be those who had received information about perinatal oral health and were aware of the association between poor maternal oral health and adverse pregnancy and infant outcomes. This is consistent with earlier studies^{12, 13, 17, 22} which show that pregnant women are unaware of the importance of maternal oral health and consequently avoid seeking regular dental care. This study also shows that this lack of awareness among pregnant women, especially in Australia, can be attributed to the limited information on perinatal oral health that is provided to them by antenatal care providers. Only 10% of women in the study had received any information about oral health care during their pregnancy, with the main source of information being oral health promotional material rather than antenatal care providers.

Conclusion

The present study indicates that the oral health status is not appropriate among the pregnant women. On the other hand, the high prevalence of dental plaque, poor periodontal condition and unsatisfied treatment require a preventive population based strategy with an emphasis on the improvement of the oral self-care for the pregnant women.

Comment [r19]: You can also work on this paper :
SANZ M. Periodontitis and adverse pregnancy outcomes: consensus report of the Joint EFP/AAP Workshop on Periodontitis and Systemic Diseases. 2013
Which give some guidelines of periodontal diseases for example and periodontal therapy and their effect on pregnancy...

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Comment [r20]: Add more references , especially for introduction and discussion , more studies or surveys more systematic reviews

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