

# Knowledge of Dentist of Hyderabad regarding Dental treatment of pregnant patients.

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## ABSTRACT:

**Objective:** To evaluate the knowledge of dentists of Hyderabad about treatment protocols of pregnant patient.

**Methodology:** This cross-sectional descriptive study was conducted from November 2023 to December 2023 in Hyderabad in collaboration with faculty of community dentistry, Liaquat University of Medical & Health Sciences Jamshoro. 200 dentists were contacted to participate in the study.

**Results:** According to our study dentists revealed that antibiotic amoxicillin was used in pregnant patients were 56% penicillin 9.4% and clindamycin 23.3%. According to dentists' knowledge safest trimester for dental treatment is 2nd trimester. Regarding restoration most of the dentist revealed that glass ionomer cement is the best for pregnant patients.

**Conclusion:** We conclude that there is general lack of knowledge in dentist of Hyderabad regarding dental treatment of pregnant patients. Seminars, educational programs regarding dental treatment of pregnant patients should be arranged so that our dentist must update their knowledge. There is great need of adding guidelines in dental curriculum in order to reduce the risk of any mishap.

**Key words:** KAP, Dentist problem, Pregnant ladies. Hyderabad.

## Introduction:

Dental health is a crucial aspect of overall health, as we all know, and pregnancy is a physiological condition of the female body that induces various changes in the oral cavity.<sup>1</sup> Changes like gingival hyperplasia, dental caries, gingivitis, pyogenic granuloma, salivary alterations are seen commonly in pregnant women.<sup>2</sup> High levels of gingivitis and gingival hyperplasia is associated with high levels of estrogen in pregnant female body.<sup>3</sup> Progesterone is associated with high level of bilateral pigmentation in the midface region.<sup>3,4</sup> Studies shows that there is the link between poor maternal oral health and low birth weight of their offspring.<sup>5</sup> Preterm delivery and low birth weight of child has higher risk of dental caries incidence.

Apart from oral hygiene maintenance several other barriers are present in our communities for females especially pregnant ladies like lack of awareness, negative attitude towards oral health, negative attitude of dental staff towards pregnant patient.<sup>6</sup>

Considering major aspects of oral health for pregnant patients, evidence-based guidelines has been developed by "American dental association (ADA) and American acade-

my of pediatrics dentistry (AAPD), and strictly follows the guidelines as a protocol for their pregnant patients and their babies.<sup>7</sup> It is desirable that dental surgeons should manage the pregnant patients with dental problems, according to the guidelines published by American Dental Association, until national guidelines developed for the purpose.

Treatment of acute dental infections can be treated as early as possible. Many dental practitioners believe that the ideal time for elective treatment of pregnant patient is between 14 to 20 weeks of gestation. However, it has also been shown that the type of dental treatment and its timing may be altered in pregnant if necessary.<sup>8</sup> Prescribing medicine to a pregnant patient is the major concern due to the fact of teratogenic effects on the fetus. Because these drugs cross the placenta. Dental practitioner should be aware about the toxic effects of the drugs when prescribing to the pregnant patients.

A study reveals that local anesthesia with vasoconstrictors is safe for pregnant patients in precise technique to minimize or avoid the risk of intravascular injection.<sup>9</sup> Pregnancy as physiological condition is not a contraindication of dental treatment but the treatments which are not elective can be deferred after the 1<sup>st</sup> trimester. First trimester is very risky due to the fact of fragile state and vulnerability of the fetus. Second trimester is considered safest for dental treatment. In third trimester long dental procedures should be avoided due to uncomfortable positioning of the patient.<sup>10</sup>

## Objective:

To evaluate the knowledge of dentists of Hyderabad about treatment protocols of pregnant patient.

## Methodology:

This cross-sectional descriptive study was conducted from November 2023 to December 2023 in Hyderabad in collaboration with faculty of community dentistry LUMHS Jamshoro. Using consecutive convenience sampling, 200 dentists were contacted to participate in the study. A Questionnaire containing both open and closed ended questions

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was distributed. Incomplete questionnaires and those who refused to participate were excluded, finally 180 questionnaires were available for analysis. Data analysis was done using SPSS version 23.

**Results:**

In this cohort, 56% dentist believed that antibiotic amoxicillin is used, 9.4% penicillin and 23.3% were of opinion that Clindamycin is used in pregnant ladies with dental problem. According to dentists' knowledge safest trimester for dental treatment is 2<sup>nd</sup> trimester. Regarding restoration most of the dentist revealed that glass inomer cement is the best for pregnant patients as shown in table.

Antibiotics chosen n=180		
Safest antibiotic	n	Percentage
Amoxicillin	101	56.1%
Penicillin	17	9.4%
Clindamycin	20	11.1%
Don't know	42	23.3%
Safest Trimester for dental treatment		
Trimester	n	Percentage
1 <sup>st</sup> trimester	4	2.2%
2 <sup>nd</sup> trimester	149	82.8%
3 <sup>rd</sup> trimester	17	9.4%
Don't know/ Any trimester	10	5.6%
According to restoration		
Restorative material	n	Percentage
Glass inomer cement	105	59.4%
Composite	57	31.7%
Calcium hydroxide cement	11	6.1%
Zinc oxide eugenol	5	2.8%
Amalgam restoration safe in pregnancy		
	yes	No
	43.3%	56.71%
Safest trimester for extraction		
Trimester	n	Percentage
1 <sup>st</sup> trimester	24 (13.3%)	24 (13.3%)
2 <sup>nd</sup> trimester	72 (40%)	72 (40%)
3 <sup>rd</sup> trimester	49 (27.2%)	49 (27.2%)
Any time in pregnancy	35 (19.4%)	35 (19.4%)

**Discussion:**

Maintaining oral hygiene is crucial as it helps prevent the onset of early childhood caries in children after birth. However, it is observed that pregnant women often neglect their oral hygiene and do not seek dental care during pregnancy.<sup>11-15</sup>

About preference of antimicrobial in pregnant ladies with dental problem, 56.1% dentist mentioned amoxicillin, Clindamycin (11.1%) and penicillin (9.4%) and clindamycin 11.1% can be given during pregnancy. A study conducted by Nardello et al showed that the use of penicillin, ccephalosporins and erythromycins are the most favored drugs used during pregnancy.<sup>16</sup> Study conducted by Ali-

abadi T et.al and Steinberg et.al showed that penicillin and cephalosporins are two most commonly prescribed antimicrobial during pregnancy.<sup>17,18</sup> This could be due to the reason that these drugs are considered safe during pregnancy. During current study 75% dentists showed willingness to perform dental treatment for pregnant patient. A study conducted at Karachi reported that 86.5% dentist offer dental treatment during pregnancy.<sup>19</sup> According to study safest trimester for dental treatment during pregnancy is 2<sup>nd</sup>. These findings look identical with findings of other published study.<sup>19</sup> According to our results dentist revealed that amalgam restoration 43.3% said yes, its safe while 56.7% said no it's not safe during pregnancy this could be due to amalgam poisoning of mercury or may be due to amalgam tattooing.

Current study conducted with small sample and dentist from a single center were enrolled for the study. It is highly desirable to conduct multicenter study with large sample size so that the results may be generalizable. The use of safest restorative materials during pregnancy should also need to probe appropriately so that the unwanted effect may be avoided.

**Conclusion:**

We conclude that there is a widespread lack of knowledge among dentists in Hyderabad concerning the dental treatment of pregnant patients. Seminars and educational programs on this topic should be organized to ensure that our dentists can update their knowledge. There is a significant need to incorporate guidelines into the dental curriculum to minimize the risk of any mishap.

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