



# Oral Health in Pregnant and Breastfeeding Patients in the Town of Agujita, Coahuila, México.

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## ABSTRACT

Some diseases of the oral cavity have been related to systemic pathologies typical of some pregnant women, which in the long time can harm their health. **The aim** was to carry out an evaluation of the oral health of pregnant and lactating women and to obtain, through a quantitative study, the main conditions or changes they suffer from. **Materials and Methods:** 38 women from the Family Medicine Unit No. 26 in the town of Villa de Agujita, Coahuila, México. were included, 22 pregnant women and 16 lactating women, surveys and clinical inspection were carried out to prepare this study to identify the main problems that can predispose to health problems, not only oral but in general. **Results:** 95% of them have not received any information regarding preventive measures, nor the changes by which most of them presented in terms of their oral cavity, an indicator of pregnant women in 95% presented symptoms related to a pregnant gingivitis, which if not treated in a timely manner could become periodontitis. **Conclusion.** It is necessary to carry out better health programs, in terms of prevention and care, with the appropriate materials to promote proper oral health.

**Keywords:** Oral health, oral hygiene, pregnancy, breastfeeding, oral diseases, systemic diseases.

## I. INTRODUCTION

During the gestation phase, pregnant women show some special needs for their care, and one of them is related to their oral health due to different biological and physical changes that have a great influence on the oral cavity, especially during this period.<sup>[1,2]</sup> Certain endocrinological changes cause variations or alterations in the functioning of the body, for example, gonadotropin increases in the first trimester of pregnancy, which is associated with vomiting and nausea. The acidity that occurs during vomiting results in the erosion of tooth enamel on the lingual and palatal surfaces of the dental organs.<sup>[3]</sup> Due to the general discomfort that most women experience during this stage, inadequate oral hygiene behavior is associated with a change in dietary habits with a greater intake of sugar-rich foods that are detrimental to the oral health of pregnant women.<sup>[4]</sup> It has been shown that oral health is important in preventing certain pathologies such as gingivitis, periodontitis, halitosis, caries, granulomas, etc., which are very



common during these stages of pregnancy or lactation. The objective of this study is to provide information on the oral hygiene and health situation of these patients and, along with it, suggest a care protocol for pregnant and lactating women in the community of Agujita in the state of Coahuila, México.

## II. MATERIALS AND METHODS

For the execution of the study, 38 women between the ages of 15 to 45 years in the stage of pregnancy and breastfeeding, who attend monthly consultation and revision by the Family Medicine department of the Unit of Family Medicine No.26 of the town of Villa de Agujita, were selected. Later, they were referred to the dental service where they were informed that a study was being conducted to determine their oral health and hygiene. They were given a survey to read and answer, with instructions that the data provided should be current and truthful and would not be disclosed to anyone. They were also informed that the information would only be used for this study. Any doubts they had were addressed and they were asked to sign the questionnaire if they wished to participate in the study. Afterward, they were invited to the dental unit and an interrogation was conducted to obtain their data and fill out their medical history, detailing any possible pathologies or abnormalities they may have had. This information was used to collect additional data during the study. Clinical data of their oral cavity was also collected by using the exploration techniques and materials available in the service. Mirrors were used to observe oral tissues, mucosa, cheeks, palate, salivary gland excretory ducts, floor of the mouth, and lips. An explorer was used to examine the teeth for possible cavities caused by bacteria or possible fractures. Cotton pliers were used to check the mobility of some dental organs in some cases. For pulp vitality tests, a cold spray (Endo-ice in spray) was used in case of suspected pulp complex disorders or dental pain reported by the patient. Patients were then informed of the possible changes in their body, specifically in their oral cavity, due to hormonal changes during pregnancy. The different methods of care to be taken during this stage of their life were explained, such as proper tooth brushing, use of appropriate toothpaste, proper use of dental floss, use of mouthwash, regular application of topical fluoride, and constant check-ups and dental prophylaxis to maintain their oral health. The possible effects of not having adequate oral health care were explained and how this could impact their pregnancy. For women in the lactation period, the importance of

continuing their constant check-ups and the care they need to take was explained, and they were informed that it is important not to suspend breastfeeding unless there are scientific reasons to do so. At the end of the consultation, they were given a dental brush and floss as a gift.

## III. RESULTS

Surveys and clinical histories were taken from 38 women, 22 pregnant and 16 lactating, aged between 15 and 42 years, during the period from August 2019 to July 2020. Women were grouped according to the trimester of pregnancy or the breastfeeding period in which they were examined. Based on the interviews conducted with the total study population, it was determined that 95% of pregnant women had not received any talk about oral health and hygiene, and only the other 5% had received one but did not remember being mentioned in that talk. Of the lactating women, 87% had also not received any talk about the health care they should have, and the other 13% had received one but could not follow the instructions or did not remember them. According to the interviews, 90% of the pregnant population experienced a sensation of reflux or vomiting during their pregnancy, and only 10% mentioned that they currently did not suffer from it. Of the lactating women, 87% no longer suffered from it in their lactation stage, and only 13% reported having very sporadic cases. 59% of pregnant women denied currently suffering from any type of dental sensitivity, while 41% reported suffering from sensitivity when consuming cold drinks. 56% of lactating women reported not suffering from any dental sensitivity, while 44% confirmed having sensitivity when consuming cold drinks. (Table I) 95% of women reported bleeding in their gums when brushing their teeth, eating, or waking up, while 5% reported not noticing any bleeding in their gums. 93% of lactating women reported suffering from bleeding gums, while 7% reported not perceiving it. 90% of women reported in the interview perceiving bad odor coming from their mouth without apparent reason, while 10% reported not perceiving it. 93% of lactating women perceived a sensation of bad breath, while the other 7% reported not suffering from it. 100% of pregnant women mentioned not knowing an adequate technique for brushing their teeth, while 93% of lactating women reported not knowing an effective technique for brushing, and only 7% reported and showed awareness. (Table II) 95% of pregnant women mentioned not knowing the correct way to use dental floss and reported not using it in their daily cleaning routine, while 5%



highlighted their use and knowledge of how to use it. On the other hand, 87% of lactating women denied using dental floss, and only 13% mentioned its use but not on a daily basis. 64% of pregnant women who participated in the study reported not using mouthwash as part of their oral hygiene routine, while the other 36% used it but not regularly. In the case of lactating women, only 25% of the population reported the use of mouthwash, but not regularly, and the other 75% mentioned not using it during their daily hygiene routine. (Table III) 81% of the pregnant women population is unaware of an effective way to prevent dental caries, and only 27% have this knowledge. For lactating women, 87% are unaware, and only 13% know how to act preventively. (Table IV)

#### IV. DISCUSSION

Pregnant women from the first to the third trimester and those who were breastfeeding from the first to the third month were selected because previously published studies have shown alterations in oral health caused by pathologies that are related to other systemic diseases, demonstrating that it is important for all pregnant and lactating women to have dental control.<sup>[5,6,7]</sup> The present investigation showed that the pregnant and lactating population in the Agujita Coahuila area is in a situation of vulnerability regarding their oral health, due to the lack of knowledge of the main measures and techniques of oral hygiene that can be performed during the gestation period. This is not an isolated problem that arises in different regions of the world.<sup>[8,9]</sup> Hernandez in 2015 mentions that it is important for dentists to know the importance and fundamental aspects that breastfeeding brings with it and to promote them, along with inculcating corresponding oral hygiene and feeding habits.<sup>[10]</sup> Lara and Santiago concluded in 2016 that preventive dental care is fundamental and on a solid basis during the first months of gestation, considering the close relationship between general health and oral health.<sup>[11]</sup> In the present investigation, it was determined that 95% of women had not received any talk about oral health and hygiene, contributing to its deterioration and leading to the appearance of pathologies such as gingivitis and dental caries, affirming previous studies by Yllescas.<sup>[12]</sup>

Pregnant women should be aware that dental care during pregnancy is safe for both the mother and the baby.<sup>[13]</sup> More intensive education on dental health in Family Medicine Units can lead to better oral and dental health in pregnant and lactating women.

#### V. CONCLUSIONS

In the present study, it was qualitatively demonstrated that the main problem faced by the population of pregnant and lactating women of the Family Medicine Unit No. 26 in the locality of Villa de Agujita, Coahuila, is the lack of sufficient information regarding oral hygiene and health measures. Only 5% of pregnant women and 13% of lactating women had received any information about the necessary care and changes they should make. Furthermore, alarming symptoms of gingivitis were observed in 95% of pregnant women and 93% of lactating women, which, if not properly controlled, could progress to possible periodontitis. The purpose of this study is to propose a care protocol that allows for the improvement of public oral health systems, the implementation of more and better health education programs, prevention campaigns, and action plans that provide information and address the main conditions that affect vulnerable populations. This will raise awareness about the potential complications that the female population, in particular, may face, as described in this study, and provide appropriate care to the exposed communities.

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Age Range	Pregnant		Lactating woman		
	No.	%	No.	%	
15 a 21	4	18	4	25	
22 a 28	11	50	6	37	
29 a 35	5	23	4	25	
36 a 42	2	9	2	13	
<b>Total</b>	<b>22</b>	<b>100</b>	<b>16</b>	<b>100</b>	
<b>Have you received oral Health talks before?</b>					
Pregnancy trimester	Yes	No	Lactation Period	Yes	No
First	0	7	First	1	9
Second	1	13	Second	0	4
Third	0	1	Third	1	1
<b>Total / %</b>	<b>1 / 5%</b>	<b>21 / 95%</b>	<b>Total / %</b>	<b>2 / 13%</b>	<b>14 / 87%</b>
<b>Have you currently experienced a sensation of vomiting or reflux?</b>					
Pregnancy trimester	Yes	No	Lactation Period	Yes	No
First	7	0	First	1	9
Second	13	1	Second	1	3
Third	0	1	Third	0	2
<b>Total / %</b>	<b>20 / 90%</b>	<b>2 / 10%</b>	<b>Total</b>	<b>2 / 13%</b>	<b>14 / 87%</b>
<b>Have you experienced dental sensitivity to cold?</b>					
Pregnancy trimester	Yes	No	Lactation Period	Yes	No
First	3	4	First	5	5
Second	5	9	Second	1	3
Third	1	0	Third	1	1
<b>Total / %</b>	<b>9 / 41%</b>	<b>13 / 59%</b>	<b>Total / %</b>	<b>7 / 44%</b>	<b>9 / 56%</b>

Table 1. Age Range of Pregnant and Lactating Women; Division by Trimester of Oral Health Talks, Vomiting or Reflux, and Dental Sensitivity.



<b>Have you noticed bleeding in your gums?</b>					
<b>Trimester of pregnancy</b>	<b>Yes</b>	<b>No</b>	<b>Lactation period</b>	<b>Yes</b>	<b>No</b>
<b>First</b>	<b>7</b>	<b>0</b>	<b>First</b>	<b>9</b>	<b>1</b>
<b>Second</b>	<b>13</b>	<b>1</b>	<b>Second</b>	<b>4</b>	<b>0</b>
<b>Third</b>	<b>1</b>	<b>0</b>	<b>Third</b>	<b>2</b>	<b>0</b>
<b>Total / %</b>	<b>21 / 95%</b>	<b>1 / 5%</b>	<b>Total / %</b>	<b>15 / 93%</b>	<b>1 / 7%</b>
<b>Have you noticed bad breath coming from your mouth?</b>					
<b>Trimester of pregnancy</b>	<b>Yes</b>	<b>No</b>	<b>Lactation period</b>	<b>Yes</b>	<b>No</b>
<b>First</b>	<b>7</b>	<b>0</b>	<b>First</b>	<b>9</b>	<b>1</b>
<b>Second</b>	<b>12</b>	<b>2</b>	<b>Second</b>	<b>4</b>	<b>0</b>
<b>Third</b>	<b>1</b>	<b>0</b>	<b>Third</b>	<b>2</b>	<b>0</b>
<b>Total / %</b>	<b>20 / 90%</b>	<b>2 / 10%</b>	<b>Total / %</b>	<b>15 / 93%</b>	<b>1 / 7%</b>
<b>Do you know the correct way to brush your teeth?</b>					
<b>Trimester of pregnancy</b>	<b>Yes</b>	<b>No</b>	<b>Lactation period</b>	<b>Yes</b>	<b>No</b>
<b>First</b>	<b>0</b>	<b>7</b>	<b>First</b>	<b>1</b>	<b>9</b>
<b>Second</b>	<b>0</b>	<b>14</b>	<b>Second</b>	<b>0</b>	<b>4</b>
<b>Third</b>	<b>0</b>	<b>1</b>	<b>Third</b>	<b>0</b>	<b>2</b>
<b>Total / %</b>	<b>0 / 0%</b>	<b>22 / 100%</b>	<b>Total / %</b>	<b>1 / 7%</b>	<b>15 / 93%</b>

Table II. Division by Trimesters: Gingival Bleeding, Halitosis, and Correct Dental Brushing.



<b>Do you know the correct way to use dental floss and do you use it?</b>					
<b>Trimester of pregnancy</b>	<b>Yes</b>	<b>No</b>	<b>Lactation period</b>	<b>Yes</b>	<b>No</b>
<b>First</b>	<b>0</b>	<b>7</b>	<b>First</b>	<b>1</b>	<b>9</b>
<b>Second</b>	<b>1</b>	<b>13</b>	<b>Second</b>	<b>0</b>	<b>4</b>
<b>Third</b>	<b>0</b>	<b>1</b>	<b>Third</b>	<b>1</b>	<b>1</b>
<b>Total / %</b>	<b>1 / 5%</b>	<b>21 / 95%</b>	<b>Total / %</b>	<b>2 / 13%</b>	<b>14 / 87%</b>

  

<b>¿Do you use mouthwash?</b>					
<b>Trimester of pregnancy</b>	<b>Yes</b>	<b>No</b>	<b>Lactation period</b>	<b>Yes</b>	<b>No</b>
<b>First</b>	<b>4</b>	<b>3</b>	<b>First</b>	<b>3</b>	<b>7</b>
<b>Second</b>	<b>3</b>	<b>11</b>	<b>Second</b>	<b>0</b>	<b>4</b>
<b>Third</b>	<b>1</b>	<b>0</b>	<b>Third</b>	<b>1</b>	<b>1</b>
<b>Total / %</b>	<b>8 / 36%</b>	<b>14 / 64%</b>	<b>Total / %</b>	<b>4 / 25%</b>	<b>12 / 75%</b>

Table III. Correct Use of Dental Floss and Mouthwash.

<b>Do you know how to prevent dental caries?</b>					
<b>Trimester of pregnancy</b>	<b>Yes</b>	<b>No</b>	<b>Lactationperiod</b>	<b>Yes</b>	<b>No</b>
<b>First</b>	<b>2</b>	<b>5</b>	<b>First</b>	<b>2</b>	<b>8</b>
<b>Second</b>	<b>2</b>	<b>12</b>	<b>Second</b>	<b>0</b>	<b>4</b>
<b>Third</b>	<b>0</b>	<b>1</b>	<b>Third</b>	<b>0</b>	<b>2</b>
<b>Total / %</b>	<b>4 / 27%</b>	<b>18 / 81%</b>	<b>Total / %</b>	<b>2 / 13%</b>	<b>14 / 87%</b>

Table IV. Caries Prevention.