Assessment of oral health status of pregnant women participating in a family health program in the city of Lucas do Rio Verde – MT – Brazil

Abstract
The aim of this study was to assess the oral health status of pregnant women. Eighty-eight (88) women who frequented the Pre-Natal program of the six Family Health Programs in the municipality of Lucas do Rio Verde-MT, Brazil, were assessed by clinical exam using the DMFT and CPI indexes. A DMFT index of 11.08 was found, and with regard to CPI, 40% of the pregnant women presented a sextant with bleeding. It was concluded that it is necessary to reinforce knowledge about oral health of the pregnant women examined, by means of preventive/educational programs with the purpose of improving the DMFT and CPI indexes.

Key Words:
family health program, pregnant women, DMFT, periodontal health, oral health

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Introduction
The Family Health Program was created by the Ministry of Health from the community health agents’ program in 1994–95, with the strategy of directing basic attention to the community.

In December, 2000, the Oral Health Team (OHT) was added to the family health team through Administrative Ruling 1.444, by the ex-Minister of Health, José Serra, which had two modalities: I: one consisting of a dentist and dental office assistant (DOC) and II: one consisting of a dentist and dental office assistant (DOC) and dental hygiene technician (DHT). Lucas do Rio Verde is a municipality located in the North of the State of Mato Grosso, approximately 360 Km from Cuiabá, the State capital, with an estimated population of 25,792 inhabitants in its territorial area of 3,660 Km². At present it has six Family Health Units, which are denominated by the municipality as FHP I, FHP II, FHP III, FHP IV, FHP V and FHP VI. The Lucas do Rio Verde FHP offers special assistance to the pregnant women that frequent them, offering them monthly medical consultations, educational lectures about personal and baby care, dental assistance and exams, among others.

The evidence that caries is a multifactorial, transmittable disease is extremely important. The notion that the mother is the main source of transmitting oral microorganisms to her children comes from the 1960s. It has been reported that some of the changes supposedly related to hormones occur in the oral cavity during pregnancy, and the change most frequently mentioned in the literature is the increased susceptibility to gingival problems.

The aim of this study was to assess the oral health status of pregnant women who frequented the Prenatal Program of the six Family Health Programs in the municipality of Lucas do Rio Verde-MT.

Material and Methods
The study obtained a favorable report from the Research Ethics Committee of the “Universidade do Sagrado Coração” (REC/USC), on September 16, 2004, in Protocol Number 061/2004, in accordance with Resolution CSN/196, of 1996, on research ethics. After approval, 88 pregnant women ranging from 13 to 43 years of age, who frequented the Family Health Programs of all the Health Units located in the municipality of Lucas do Rio Verde, were assessed. The clinical exam to assess caries and periodontal disease was performed by one examiner, in the meeting room of the Family Health Units, under artificial light, during the afternoon period, on the same day as these mothers attended the prenatal program, because it was the day when the largest number of pregnant women were present at the units.

The chart used for the epidemiological survey was adapted from Project SB 2000, at present called “Brasil Sorridente” (Smiling Brazil). To assess the presence of caries, the DMFT (Decayed Missing and Filled Tooth) index, and for periodontal disease, the Community Periodontal Index (CPI). The criteria recommended by the Examiner Manual of the SB200 Project, the present “Sorria Brasil”, were followed. The data were collected and noted on a clinical chart, together with other information with reference to identification, age and skin color.

The data were carefully assessed and statistically tabulated. The mean and standard deviation of the DMFT and CPI indexes in the results were calculated, and the Spearman correlation test was used to compare the variables age and DMFT.

Results and Discussion
Of the 193 pregnant women registered in 2004 at the Family Health Units, 88 agreed to participate in this research. Of these, 46.4% were white, 20.6% black and 32.9% mulattos. As regards the caries assessment, the mean of the DMFT index was 11.08 with a standard deviation of 5.96.

In Tables 1 and 2 the frequencies and percentages of the maximum CPI distributions and DMFT index are presented. In the study conducted by Montandon et al. it was detected that caries disease presents greater prevalence than periodontal disease, in the group of pregnant women assessed, as 52.4% alleged having noted new caries lesions during pregnancy. In the present study it was found that 57% of pregnant women assessed presented a DMFT index higher than 10, signifying that the majority had high caries experience. This index was slightly higher than those related to studies conducted with pregnant women in the city of Salvador – BA, whose DMFT value was 9.71 and in the study of Almeida Junior et al., with pregnant women in Aracajú – SE, since the mean DMFT was 10.4. Whereas Trindade, in a study conducted with pregnant cardiopath women in São Paulo, found a mean DMFT of 14.54, higher

<table>
<thead>
<tr>
<th>Table 1 - Distribution of the Community Periodontal Index scores (CPI) among the studied population.</th>
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<tbody>
<tr>
<td>CPI</td>
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<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>0 - Healthy Sextant</td>
</tr>
<tr>
<td>1 - Sextant with bleeding after probing</td>
</tr>
<tr>
<td>2 - Calculus (any amount, but with the entire black area of the probe visible)</td>
</tr>
<tr>
<td>3 - Pocket of 4 to 5 mm (gingival margin in the black area of the probe)</td>
</tr>
</tbody>
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than the above-mentioned values. These indexes are considered much lower, when compared with the study conducted with the staff of a cooperative in the State of Santa Catarina, which reported a mean DFMT of 10.21. Since this study concerns a high DFMT in a group of staff members that was not made up of pregnant women, it justifies the concept that it is not true that teeth become more fragile during the gestational period, as proved by clinical studies. Some studies have reported to propensity of pregnant women to present aggravation of pre-existent periodontal disease in the oral cavity, due to the increase in hormone levels in this period, and this disease being a risk factor for premature birth and low birth weight babies. The mothers that presented periodontitis with loss of insertion of over 3mm, with 60% of dentition areas affected, presented 7.5 times higher risk of having premature infants with low birth weights. In a comparative studied conducted among pregnant and non-pregnant women, no relation was detected between periodontal disease and low birth weight, thus suggesting that this could occur with the development of other factors, such as genetic and environmental factors. For this and other reasons, it is necessary to conduct other studies along the same research lines in order to establish more detailed scientific parameters.

As regards CPI (Table 1) it was found that over 40% of the pregnant women presented a score of over 1, that is, they presented a sextant with bleeding and presence of calculus. But only 1% had a score of 3, showing that only one pregnant woman presented more developed periodontal disease with a shallow periodontal pocket. Thus, guidance and consciousness raising about hygiene in these pregnant women could improve this situation, and in cases where there is calculus, a simple scraping would remove these niches of plaque accumulation. According to Taani, as pregnant women undergo hormonal changes, increasing their blood and crevicular fluid flows, the presence of pockets could be the result of gingival swelling and alteration.

As Gesser et al. consider periodontal disease and gingivitis to be different diseases, for them it is not advisable to use the CPI index in the case of a more detailed survey of periodontal diseases. In this study, this was not relevant, because the object was to assess the gingival conditions, which is exactly what the index allows in a fast and easy way. In Table 3, the result of the Spearman Correlation test is observed, which shows that the trend is for the DMFT to increase with age.

Frazão affirmed that caries disease increases with age, and this was proved in the present study, since a trend for the DMFT to increase with age was observed. The gestational period is an appropriate time for making the woman aware of the importance of hygiene, because she is more receptive to information, due to being more sensitive and desirous of offering her baby the best.

It was concluded that the prevalence of the DMFT index was considered very high, but there was no great discrepancy in comparison with other studies; It is necessary to reinforce knowledge about oral health of the pregnant women examined, by means of preventive/educational programs with the purpose of improving the DMFT and CPI indexes.

### Table 2 - Distribution of the DMFT Index values

<table>
<thead>
<tr>
<th>DMFT</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Accumulated percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 5</td>
<td>15</td>
<td>17.0</td>
<td>17.0</td>
</tr>
<tr>
<td>5 – 10</td>
<td>23</td>
<td>26.1</td>
<td>43.1</td>
</tr>
<tr>
<td>10 – 15</td>
<td>30</td>
<td>34.1</td>
<td>77.2</td>
</tr>
<tr>
<td>15 – 20</td>
<td>14</td>
<td>15.9</td>
<td>93.1</td>
</tr>
<tr>
<td>20 – 25</td>
<td>4</td>
<td>4.6</td>
<td>97.7</td>
</tr>
<tr>
<td>25 – 30</td>
<td>2</td>
<td>2.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 3 - Spearman Test of Correlation between DMFT and age

| Variables Correlation Prob(bicaudal) Number |
|------------------------------------------|---------------------------------|------------------|
| Age x DMFT 0.404174 0.000094 88          |

### References

10. Scavuzzi AIF, Rocha MCBS, Viana MIP. Estudo da prevalência...


