

# Oral Health in Pregnancy: Old problem, New Findings Yet More Predicaments

Sir,

Pregnancy is a physiological state substantiated by a number of transitory changes that may be presented as a variety of physical signs and symptoms having potential impact on the patient's health, acuity, and environmental interactions. Many women grumble of various symptoms that develop during this time.<sup>[1,2]</sup> The most common complaints that are reported during this state includes nausea and vomiting, nasal congestion, heartburn, alteration in taste and food cravings, hyperventilation and shortness of breath, and fatigue that are often caused by the physiologic changes of various body systems, which may sequentially cause unnecessary modification in the oral cavity and increased vulnerability to oral infection.<sup>[3]</sup>

The remarkable endocrinal changes seen in pregnancy and associated negligence of oral hygiene measures have a tendency to increase incidence of oro-dental diseases like gingivitis and increased incidence of dental caries. Pregnancy gingivitis is characterized by increased redness, edema, and higher tendency towards bleeding and inflammation that occurs as a result of increased circulating levels of progesterone and its effects on the microvasculature. Sex hormones like estradiol and progesterone can contribute to inflammatory processes by stimulating prostaglandin synthesis in the gingiva in pregnancy.<sup>[4]</sup> More interestingly, these hormones occasionally provide vital growth factors for the bacterium *Prevotella intermedia*, which show a striking increase in the sub-gingival plaque during pregnancy making the interproximal papillae red, edematous, and tender to palpation, and bleed easily if subjected to trauma (pyogenic granuloma or pregnancy tumor).<sup>[5]</sup>

The consequence of motherly periodontal health status on prematurity and low birth weight babies has been well-documented, yet the exact mechanism by which periodontal diseases causes preterm birth and/or low birth weight have not been explained.<sup>[6,7]</sup> However, one proposed mechanism is the nature of the periodontal disease itself, where the inflamed periodontal tissues produce significant amounts of inflammatory cytokines primarily interleukin1beta, IL-6, prostaglandin E<sub>2</sub>, and tumor necrosis factor alpha, which may have systemic effects on the host. Endotoxin derived from periodontal pathogens in pregnant women with periodontal disease may spark monocyte-macrophage cascade in the

circulating blood stream.<sup>[8]</sup> Therefore, pregnant women must be well-motivated to maintain good oral hygiene and have the routine dental checkups done. The supervising clinical staff must also be scrutinized and enquired regarding their awareness about these conditions or if they offered any recommendation or suggestions to such patients.<sup>[9]</sup> Quantitative data obtained from such act might be helpful in planning oral health education and encouragement programs to reduce the risk of adverse pregnancy outcomes.

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