

## **PREGNANCY AND DENTISTRY: A LITREATURE REVIEW ON RISK MANAGEMENT DURING DENTAL TREATMENTS**

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### **ABSTRACT**

**Background:** Pregnancy is a special time in a woman's life that brings about a number of physiological changes that affect oral health. The study's goal is: The current study set out to undertake a critical evaluation of the published literature on pregnancy and dentistry, the most common oral conditions that arise during pregnancy, their associations with unfavorable pregnancy outcomes, and the safe dental procedures that can be carried out at this time.

**Methods:** Using particular keywords, MeSH phrases, and the boolean operators "OR" and "AND," a Medline/COCHRANE search was conducted.

**Results:** Between 2000 and 2021, 146 publications were found through the search, including guidelines, meta-analyses, systematic and non-systematic reviews.

**Conclusions:** Periodontal problems are usually worsened during pregnancy, and periodontal disease is frequently seen in pregnant individuals because to the heightened inflammatory and immunological body response that defines pregnancy. The literature has inconsistent study findings about the link between periodontitis and unfavorable pregnancy outcomes. The negative consequences did not significantly decrease after periodontal therapy. Many dentists are hesitant to treat pregnant patients for dental issues, frequently because they lack knowledge in this area. Dental care that is both preventative and restorative is safe to receive while expecting. If absolutely necessary, diagnostic radiographs can still be taken after the first trimester. Both anesthetics (like lidocaine) and analgesics (like paracetamol) are regarded as safe. Antibacterial medications such amoxicillin, ampicillin, and certain cephalosporines and macrolides may also be recommended in cases of infection. During the first trimester, when organogenesis occurs and the fetus is most vulnerable to severe abnormalities (teratogenesis). The second trimester is the best time to have dental work done (week 17 to 28). However, urgent discomfort or infections necessitate a dentist's involvement immediately, and emergency care can be given during the entire pregnancy.

**Keywords:** Risk Management, Oral Surgery, Dentistry, Pregnancy

### **INTRODUCTION**

There are many physiological changes that a pregnant woman experiences. Both systemic and local alterations, such those that take place in the oral cavity, may occur. Since dental health is a crucial component of overall health, issues with the oral cavity that affect pregnant women must be addressed right away. It is crucial that the dentist considers the physiological changes that take place during pregnancy and is aware that his treatment choices may have an impact on the lives of two persons (the mother and the baby). Therefore, the clinician should take all necessary steps to reduce the probability of unfavorable events [1].

The cardiovascular, pulmonary, renal, gastrointestinal, and hematological systems all undergo alterations throughout pregnancy.

In order to provide the increased oxygen demand of maternal and placental tissues, plasma volume and blood cell mass rise. To accommodate the fetus' needs, the heart rate rises. Blood pressure starts to drop in the second trimester, which might cause hypotensive supine syndrome [2]. Pregnant women are more likely to experience

thromboembolic events including deep vein thrombosis and pulmonary embolism due to changes in the plasma levels of the coagulation factors VII, VIII, IX, X, and XI, an increase in fibrinogen, and an increase in leukocytes and erythrocytes [3,4]. The uterus's pressure on the diaphragm makes breathing more challenging. Up to 75% of pregnant women have an increase in dyspnea episodes and a 20% reduction in lung residual functional capacity during the third trimester [5].

Women who are pregnant often have a preference for or aversion to a particular meal. In order to maximize nutrient absorption, gastric and intestinal emptying slows down, which can lead to digestive issues like heartburn, nausea, and vomiting [6]. Enamel degradation (perimolysis) can result from an increase in acidity in the oral cavity brought on by vomiting [7]. The frequency and duration of nausea and/or vomiting should be examined by the dentist.

The glomerular filtration rate rises during pregnancy, which has an impact on the clearance of urea, uric acid, and creatinine. The tightness of the uterus causes the anterior bladder to be pushed up. The increased need to urinate more frequently and the increased danger of developing urinary tract infections are two of pregnant women's most common complaints. Due to their quicker clearance, medications for renal excretion that are indicated during pregnancy should be taken in larger doses [8].

Due to changes in the endocrine system during pregnancy, pregnant women are also at risk of acquiring gestational diabetes. Obese women with a family history of type II diabetes have an increased risk of developing the condition [9].

There is a wealth of research that describes the physiological changes that take place in the mouth during pregnancy. The patient who is pregnant is more at risk for dental infections since they don't have regular dental checkups and put off getting dental treatments. Oral health is impacted by immunological changes that occur during pregnancy. The suppression of some neutrophil functions in particular may be the cause of the worsening of gingivitis. In the relationship between periodontal disease and pregnancy, neutrophil function suppression is an important element [10,11].

Pregnant women are more likely to develop gingivitis and hyperplasia due to increased capillary permeability brought on by high amounts of estrogen in the blood [12].

During pregnancy, there are some changes in the way that medications are distributed, broken down, and eliminated. Drugs' pharmacokinetics and, consequently, their action (pharmacodynamics) might differ under specific situations.

Drug absorption and bioavailability are negatively impacted by the digestive system's decreased generation of hydrochloric acid. The activation of prodrugs, the process of absorption, metabolism, and offset can all be affected by changes in the synthesis of liver enzymes, on the other hand. An illustration of this phenomena is the conversion of codeine to morphine by the cytochrome CYP2D6, whose activity is elevated during pregnancy. In pregnant women, codeine quickly relieves pain, but it also has a higher toxicity [13,14]. Pregnant patients have increased body mass and volume, which results in larger medication distribution volume and clearance [15]. Drug half-lives cannot be predicted because of changes in clearance and distribution volume during pregnancy, thus each drug should be examined separately [16].

Similar to the blood-brain barrier, the placenta is a semipermeable barrier to the passage of chemicals. The placenta can be crossed by all medications that can penetrate the blood-brain barrier. In all clinically identified pregnancies, sporadic spontaneous abortion occurs in the first trimester at a rate of 10% to 15% [17]. Endocrine factors and uterine deformities can contribute to spontaneous abortions, although chromosomal abnormalities are the most common cause of these birth defects.

The birth of a child before 37 weeks of gestation is referred to as a preterm birth or premature birth [18]. Infection, increased uterine volume, iatrogenic causes, and idiopathic variables are examples of etiological factors.

Preeclampsia is a pregnancy condition that is characterized by edema, proteinuria, and high blood pressure (at least 140/90 mmHg) [19]. 3-7% of pregnant women experience it. For pregnant women who do not consume enough calcium through their diet, the World Health Organization (WHO) advises calcium supplements [20]. Preeclampsia risk may be decreased by calcium supplementation throughout pregnancy, according to studies. Additionally, it aids in avoiding premature birth [21]. 3-7% of pregnant women have gestational diabetes mellitus, and this number is growing [22,23]. Women who experience gestational diabetes mellitus during pregnancy are more likely to acquire periodontal disease. Furthermore, once periodontal disease has taken hold, it makes it more challenging to regulate diabetes. Untreated periodontal disease creates a state of systemic inflammation, which helps to raise blood sugar levels. As a result, it's critical to catch the early clinical symptoms of periodontitis in diabetes patients [24].

During the first ten weeks of an embryo's life, organogenesis—the creation of organs—occurs. As a result, exposure to an environmental element must take place during this specific window of time in order for it to be deemed teratogenic or capable of causing defects in the embryo [25].

The current study aims to review the international scientific literature on dentistry and pregnancy in order to assess the following: the most prevalent oral diseases during pregnancy, their causes, and risk factors; the

relationship between oral pathology and adverse events involving the pregnant woman and the unborn child; the diagnostic techniques, dental, and pharmaceutical treatments that can be administered safely during pregnancy, including contraindications.

## **MATERIAL AND METHODS**

The National Library of Medicine's (NLM) thesaurus dictionary was used to find the Medical Subject Headings (MeSH) unique to this topic, as well as non-MeSH words, and to search for the work using either individual or combination searches with the boolean operators "AND" and "OR": Dentistry, dental care, dental treatment, oral health, oral hygiene, periodontitis, and periodontal disease all relate to pregnancy, pregnant patients, and pregnant women.

The following criteria were used to choose the articles:

dates of publication: 1 January 2000 to 2022; Italian and English are both used. Types of articles: Reviews, Systematic Reviews, Meta-analyses, and Guidelines.

The articles must discuss the connection between pregnancy and oral health, how dentists are aware of how pregnancy affects oral health, whether there is a biological link between oral cavity diseases and the frequency of perinatal adverse events, and finally, any additional precautions the dentist must take when diagnosing and treating pregnant patients. Reading the titles and abstracts allowed one to filter the search results. Articles that didn't fall under the purview of this review were all excluded. Studies without human participants were not included.

## **RESULTS**

There were 373 results in the search. Abstracts and titles of each paper were reviewed. Articles unrelated to the subject were not included. The entire texts of all potentially suitable articles were then collected. After finishing the reading, 146 articles were chosen, with the remaining ones being discarded as unsuitable because they did not pertain to the study's goal. Also omitted were titles that appeared more than once in the various searches. The following topics were covered in articles chosen from those published after January 1, 2000: the dentist's understanding of pregnancy and its effects; a potential link between periodontal disease, in particular, and the incidence of perinatal adverse events; and, finally, the extra precautions that the clinician must take when diagnosing and treating pregnant patients.

A second selection was done based on the strength of the scientific evidence, giving more weight to 46 publications that included systematic guidelines, meta-analyses, and reviews. If the results were unsatisfactory, the search was expanded to non-systematic reviews. Although the other 100 publications were not completely disregarded from this effort, it was decided that they were less relevant to the review's topic and provided less solid scientific evidence.

## **DISCUSSION**

### **PERIODONTAL DISEASE**

The majority of pregnant women (60–75%) experience gingivitis caused by plaque formation, which highlights the significance of developing guidelines for periodontal care and prevention. Usually beginning between the third and eighth month of pregnancy, gingivitis gradually becomes better after deliveries. The changes that accompany pregnancy frequently increase the body's response to local inflammatory agents. Gingivitis is characterized by dark red, swollen gingiva that easily bleeds and which, in fact, is a sign of altered vascularization [27]. It typically results from poor oral hygiene and/or local inflammation, which is mediated by plaque bacteria.

According to a recent study, "red complex" bacteria like *Porphyromonas gingivalis* and *Prevotella intermedia* are associated with deteriorating periodontal disease. The ratios of the microorganisms do not alter during pregnancy, but [28]. Another study compared the bacterial loads of pregnant and non-pregnant women and discovered that pregnant women had greater levels of *Campylobacter rectus*. The relationship between the concentration of these bacteria and the body's levels of estradiol provides an explanation for this outcome [29]. The bacteria, specifically the *Fusobacterium nucleatum*, which can pass the placental barrier and cause acute infections, did not differ between pregnant and non-pregnant women in a different study, on the other hand [30]. In conclusion, plaque, whose pathogenic quantitative and qualitative makeup is not modified, is not the primary cause of periodontal disease exacerbation in pregnant women. The elevated expression of inflammatory markers during pregnancy [31] is evidence that the inflammatory response is significantly active during this time.

Treatment options for periodontal disease include both surgical and non-surgical procedures, either separately or in combination. Motivating the patient and providing guidance on how to maintain good dental hygiene, avoid plaque build-up, and prevent tartar formation are the most often used periodontal treatments [33,34]. The periodontal health of pregnant women can be improved by behavioral and educational treatments, according to recent articles. These therapies are more beneficial if used throughout the entire pregnancy rather than only at the beginning [34,35].

### **TOOTH MOBILITY**

Pregnancy-related generalized tooth movement is correlated with alterations in the hard lamina's mineralization and periodontium involvement [36]. According to longitudinal research, inflamed and swollen gums lead the probing depth to increase [37]. Although the majority of research reach the transitory conclusion that clinical attachment loss (CAL) is [38,39] others claim that it does not return after the end of pregnancy [40].

Salivary composition changes during pregnancy and lactation may temporarily make teeth more susceptible to erosion and decay [41]. However, there have been no studies that indicate an increased risk of deterioration during pregnancy or the first few weeks after giving birth. In any event, untreated caries that are already present are more likely to advance.

### **EROSION**

Between 70 and 85 percent of pregnant women have nausea and vomiting, which usually go away after the first trimester. Even though morning sickness and vomiting are common in the first trimester of pregnancy, 0.3-2% of women do not have a remission of symptoms. Additionally, some pregnant women may experience hyperemesis gravidarum, a severe case of nausea and vomiting that can cause enamel erosion caused by acid, particularly on the vestibular surface [7,42].

### **EPULIS GRAVIDARUM**

Epulis gravidarum is sometimes known as a pregnant tumor or granuloma. The gingival connective tissue hyperplasia that generated the lesion makes it resemble a benign tumor. The most common places where epulis gravidarum occurs are in chronic trauma or gingival inflammation [43]. Areas close to the lesion frequently contain plaque and tartar deposits. To minimize plaque retention as much as possible, subgingival scaling and root planing should be done before delivery, along with patient education and oral hygiene recommendations [26]. After childbirth, the epulis gravidarum typically spontaneously regresses, though surgical excision may occasionally be required. The patient must be informed that surgical excision may be necessary before the pregnancy is complete [44].

### **PERIODONTAL DISEASE AND NEGATIVE PREGNANCY EVENTS**

Pregnancy-related adverse events are traumatic experiences for women and are expensive as a result of their effects. According to the World Health Organization, one of the leading causes of death for children under the age of five is premature birth [45]. In an effort to lower the risk of preterm delivery and other negative effects, some observational studies have promoted periodontal care during pregnancy.

### **PRETERM BIRTH**

The unfavorable pregnancy event most frequently linked to periodontal disease is preterm delivery. Periodontal disease is also linked to low birth weight and hypertension [46]. Cardiovascular illness, diabetes, chronic lung disease, and pregnancy outcomes have all been linked to periodontitis [47]. It has been postulated that patients with periodontal disease are more likely to experience a bad pregnancy outcome because periodontal disease is characterized by a medium-low level of inflammation. The negative correlation between periodontal disease and unfavorable pregnancy outcomes has been emphasized in a number of papers [48–54]. Contradictory findings are nonetheless produced by these research since they do not employ the same clinical measuring technique. As a result, there is still controversy over the contribution of periodontal disease to unfavorable pregnancy outcomes. The only thing that is certain is that pregnancy is likely to make periodontal disease worse [32]. Periodontal disease has been linked positively to negative pregnancy outcomes, such as preterm birth [55–57], early membrane rupture [58], preeclampsia [59], abortion [60], and postpartum endometritis, according to several observational studies on humans.

Not all observational studies, nevertheless, mention a connection between periodontal disease and preterm birth or low birth weight: A case-control study involving 236 premature and 507 term newborns was reported in 2002 by Davenport et al. Patients with higher pocket depth as determined during labor had a lower probability of being born prematurely and having babies that were underweight.

### **PERIODONTAL DISEASE AND PREECLAMPSIA: A RELATIONSHIP**

On the one hand, there is the maternal syndrome, characterized by activation of the endothelium cells, disturbances in blood volume, and control of blood pressure, proteinuria, and edema. On the other hand, there is the fetal syndrome, characterized by activation of the endothelium cells, disturbances in blood volume, and control of blood pressure. On the other hand, fetal syndrome is characterized primarily by a decrease in intrauterine growth [61]. There has been some debate regarding the findings of a number of studies that have revealed a link between periodontal disease and an elevated risk of preeclampsia. A meta-analysis on the possible relationship between periodontal disease and preeclampsia was published in 2013 by Sgolastra et al.

The analysis of 15 published studies revealed a positive correlation between the two pathologies, but the meta-analysis also revealed the need for further research due to the significant heterogeneity of the studies in the definition and diagnosis of periodontal disease as well as the poor methodological quality.

Wei et al. put forth the theory that the link could be explained by the preeclamptic situation inducing periodontal disease or, alternatively, by the enhanced inflammatory response that occurs during pregnancy [50] in the same year. However, Huang et al. disregarded the idea that periodontal therapy would reduce the incidence of preeclampsia the next year [74].

Many dentists are hesitant to treat pregnant patients for dental issues despite the fact that there is scientific evidence of the alterations and modifications that take place in the body during pregnancy. This is because there was insufficient planning, which resulted in implications and aggravations of the oral issue, with ramifications that could be harmful to both the mother and the kid.

### **THE PATIENT'S POSITIONING**

Third-trimester pregnancy puts pregnant women at risk for hypotensive supine syndrome. The larger uterus presses against the vena cava, which transports blood to the heart, when the patient is supine. A abrupt reduction in blood pressure results from the fetus's pressure. The dentist should place the patient in a semi-reclined position to prevent fainting and dizziness. To reposition the uterus towards the aorta, which does not collapse as quickly, a patient may be instructed to move to the left side or have a cushion placed under the lower back on the right [44].

### **DRUG USE WHILE PREGNANT**

The categorization of the Food and Drug Administration expresses the likelihood of medications causing birth abnormalities if used during pregnancy (FDA). Based on the validity of the available scientific data and the cost/benefit ratio, the FDA has classified medications into five categories [62].

Category A: Appropriate and carefully conducted research has not been able to establish a risk to the fetus during the first trimester of pregnancy (and there is no evidence of risk in later trimesters). Category B: There are no adequate and well-controlled trials in pregnant women, and animal reproduction studies have failed to show a risk to the fetus.

Category C: Although there are no appropriate and well-controlled human studies and animal reproduction studies have revealed a negative effect on the fetus, there may be advantages that outweigh the risks if the medicine is used by pregnant women.

Category D: Although possible benefits may justify use of the medicine in pregnant women despite potential dangers, there is positive evidence of human fetus harm based on adverse reaction data from investigational or marketing experience or human research.

Category X: Pregnancy-related dangers of the medicine obviously outweigh any potential benefits, as evidenced by studies in animals or people that show fetal abnormalities and/or by data on adverse reactions from investigational or marketing experience [62].

### **LOCAL ANESTHESIA**

All local anesthetics have the ability to breach the placental barrier and may have an impact on the fetus. These medications carry a risk of neurological and cardiovascular damage. The most common local anesthetic used during pregnancy is lidocaine. Because a large fraction of lidocaine circulates freely and is not associated to transport proteins, a large amount of lidocaine is passed from the mother to the fetus. To prolong the duration of its effects and decrease toxicity, lidocaine is frequently combined with vasoconstrictors like epinephrine. Due to the delayed anesthetic absorption caused by epinephrine-induced vasoconstriction, the blood level of lidocaine rises steadily and without peaks. With a larger safety margin, the anesthesia is administered to the fetus just as slowly. Use of lidocaine 2% with epinephrine 1: 100,000 is regarded as relatively safe because the anesthetic has little effects on the fetus even at submaximal dosages [63].

Bupivacaine and mepivacaine, which are both included in category C since no controlled studies have been done on pregnant women using them, have been linked in certain publications to reports of fetal bradycardia. A pregnant lady may get up to five tubes of epinephrine with a 1:100,000 concentration during a chair session (or ten tubes of anesthesia with a 1:200,000 concentration of epinephrine) [25].

### **ANTIBIOTICS, ANTIFUNGALS, AND ANTISEPTIC**

In the event of ongoing infectious pathological processes, antibacterial medications may be prescribed during pregnancy by selecting active ingredients with high safety ratings. At therapeutic dosages, beta-lactams like ampicillin, amoxicillin (without clavulanic acid), certain cephalosporins, and macrolides like clarithromycin and erythromycin are regarded as safe. Tetracyclines like doxycycline and minocycline, which can harm a pregnant woman's liver and result in dyschromia of the child's dental enamel, as well as gentamicin, which results in fetal ototoxicity, should be avoided instead. Nystatin and clotrimazole are safe antifungal medications, however

fluconazole and ketoconazole should be avoided since they are harmful to developing fetuses.

Many brands of mouthwash contain the antibacterial active component chlorhexidine (in quantities of 0.05–0.2%). It falls under FDA category B because there are no controlled data from human pregnancies, although animal studies have not demonstrated teratogenicity at large doses, therefore its use during pregnancy is only advised in extreme cases. Additionally, all alcohol-containing products ought to be avoided while pregnant.[63-70]

### **ANALGESICS**

Due to the possibility of postpartum hemorrhage, acetylsalicylic acid is not advised. Giving paracetamol is preferred because it also results in less gastrointestinal irritation. Additionally, NSAIDs should not be used during the first trimester of pregnancy as some authors have noted an increased incidence of septal heart abnormalities in neonates delivered to moms who took NSAIDs such as ibuprofen, naproxen, and ketoprofen. Celecoxib and rofecoxib, two novel types of cyclooxygenase inhibitors, have been placed in category C. Additionally, since these medications run the risk of prematurely closing the arterial duct during the first trimester, they should be avoided [1].

### **NITROUS OXIDE**

For sedation and analgesia during labor, nitrous oxide, also known as nitrogen oxide, is frequently used. It is utilized in obstetrics since it is simple to administer, has low toxicity, doesn't affect uterine contractions, and doesn't result in malignant hyperthermia (a severe reaction caused by exposure to certain general anesthetics). Additionally, the mixture of nitrous oxide and oxygen is widely employed in dentistry. For individuals who are phobic or worried, it is secure and guarantees effective sedation. Pregnant women frequently experience increased anxiety. Nitrous oxide is the drug of choice if the patient's anxiety levels are so high that they are impeding their ability to cooperate and iatrosedation is ineffective in controlling their fear. As far as possible, prolonged exposure should be avoided. [63-70]

Risks are significantly reduced when aspiration and elimination equipment for ambient gases are used properly. Long-term exposure to protoxide has been linked to decreased fertility, but dental treatment sedation time is relatively brief and has no harmful or teratogenic effects. There were no negative effects reported for either the patient or the fetus in a retrospective study of approximately 6000 pregnant women who underwent general anesthesia and were also given nitrous oxide. It is advised that nitrous oxide be administered by licensed and experienced staff [44].

### **MATERIALS FOR RESTORATION**

In the past, amalgam was frequently employed for restoration; today, composite materials have taken its place. As opposed to the organic mercury found, for instance, in fish, amalgam filling mercury is an inorganic substance. The inorganic mercury of amalgam restorations is continually released in the oral cavity while being chewed, especially while chewing gum, and when bruxism occurs. Similar to how using hydrogen peroxide-based toothpastes and whitening products results in amalgam fillings releasing inorganic mercury, using them while pregnant is not advised. Inorganic mercury levels in the blood temporarily rise during the insertion and extraction of amalgam restorations.[63-70]

Inhaled mercury vapors are carried to the lungs, where they can enter the bloodstream and pass via the placenta to the fetus. The quantity of inhaled vapors can be decreased by using the rubber dam and a strong aspiration mechanism. If it is not possible to do the procedure safely, it is advised to wait until after the pregnancy is over before having amalgam restorations removed. However, investigations show that neither the insertion nor removal of amalgam had any negative side effects [44]. Dental amalgam is a safe and effective material for dental restorations, according to the FDA, which classified it as a class II medical device, similar to composite materials, after analyzing 200 research.

As alternatives to amalgam, restorative materials include porcelain, gold, glass ionomers, composite resins, and gold. Polymerized resin and an inorganic filler combine to form composite resins. Recent research on methyl methacrylate monomers, including bisphenol-A (BPA), bisphenol-A glycidyl methacrylate (Bis-GMA), and bisphenol-A dimethacrylate (Bis-DMA), has demonstrated how the monomers are released into the oral cavity, penetrate the dentin, and perhaps reach the pulp. Although BPA might not be an actual ingredient in resin composite or sealants, it might be a result of salivary enzymes degrading other monomers found in the restorative materials.[63-70]

### **SURGERY PROCEDURES**

Dentoalveolar surgery aimed at the eradication of discomfort, infection, and neoplasia can be carried out during pregnancy in urgent cases. Incisions, tooth extractions, and infection drainage are some of these operations. Obviously, pregnant women should only consider oral surgery if it is absolutely necessary. Orthognathic surgery and other aesthetic procedures like orthodontic treatment must wait until after delivery. The safest time to

administer dental care is during the second trimester.

It is possible to use local anesthesia during oral surgery procedures. During the injection treatment, the dentist should utilize anesthetics that are regarded as safe (such lidocaine), stay away from using large dosages of epinephrine, and exercise utmost caution (the intravascular injection of epinephrine causes uterine artery vasoconstriction and decreased blood flow). Protective gear must always be worn and radiographs should be taken as infrequently as possible [6].

Nearly 2% of all malignant tumors during pregnancy are oral cancers. The second trimester is the most secure time to have surgery. Due to the natural decrease of cell-mediated and humoral immunity during pregnancy, there is a substantial risk of postoperative infection. Before beginning any oral surgery, the dentist or oral surgeon should speak with the patient's obstetrician. [63-70]

## CONCLUSIONS

Although the potential of performing diagnosis and treatment on pregnant patients is expressly stated in the worldwide guidelines, dentists still have a lot of hesitation about treating pregnant patients. Fear, ignorance, and misleading information are to blame for this. On the other side, the pregnant lady will frequently decline any dental care on her own. It is conceivable and safe to treat pregnant patients who require treatment, despite the fact that pregnancy is a unique event marked by numerous changes that also affect the oral cavity. Every class of regularly employed medications in dentistry has a secure substitute. The second trimester is the ideal period to provide the therapy. Although there is a link between pregnancy and an aggravation of gingivitis and periodontitis, further research is required to determine the relationship and the role of dental care in preventing unfavorable pregnancy outcomes. In particular, it's important to follow a standard procedure for determining the parameters of periodontal disease diagnosis.

Teratogens are substances that directly injure the fetus. They might be chemical, physical, or biological. While some of the defects they produce may be minor and have no effect on the fetus, others may be so severe that they could result in the death of the fetus or unborn child. Each apparatus experiences a crucial stage of development during which it is especially vulnerable to teratogen activity. Teratogens must operate during crucial stages of embryological or fetal development to cause embryopathy or feopathy in order to cause harm to an unborn child. Fetal tissues start to differentiate during organogenesis, which occurs between 4-5 and 10 weeks of gestation. This is the time period when teratogenesis is most likely to occur.

It can be proposed that there should be a clear connection between pharmacological research (the introduction of new drugs) and effective communication, not just with obstetricians but also with dentists. A collaborative obstetric-dental record should be created so that the patient has a thorough explanation of pharmacology during pregnancy in his hands. This is required to remove any concerns, uncertainties, or needless suffering for the mother and the unborn child.

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