

Thesis: “Optimizing Management Strategies for Pregnant Women at Risk of Miscarriage Before 21 Weeks of Gestation”

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This thesis seeks to explore and propose optimized management strategies for pregnant women at risk of miscarriage before 21 weeks of gestation. Miscarriage in the first and second trimesters is a major concern in obstetrics, with significant physical, emotional, and psychological implications for women. The purpose of this study is to review existing clinical evidence and treatment approaches, identify gaps in care, and recommend strategies for more effective management of women at risk for pregnancy loss. The following key areas will be examined:

Early Detection and Diagnosis: Early identification of pregnant women at risk of miscarriage is critical for timely intervention. This study will examine the effectiveness of current diagnostic tools, including clinical history, ultrasound findings (e.g., cervical length, fetal heart rate, gestational sac abnormalities), and biochemical markers such as beta-hCG and progesterone levels. The importance of recognizing risk factors such as advanced maternal age, previous miscarriage history, lifestyle factors (e.g., smoking, drug use), and underlying medical conditions (e.g., uterine anomalies, hormonal imbalances) will be analyzed in terms of predictive value.

Pharmacological Interventions: One of the most widely researched approaches in managing threatened miscarriage is the use of progesterone supplementation. The thesis will critically evaluate the efficacy of various forms of progesterone (micronized vaginal progesterone, oral, and injectable) in reducing miscarriage rates, with a focus on recent trials and systematic reviews. Other potential pharmacological treatments, including heparin, low-dose aspirin, and immunomodulatory therapies, will be discussed in terms of their impact on improving pregnancy outcomes for women with specific risk factors.

Psychological Support and Counseling: The emotional and psychological burden of a threatened miscarriage can significantly affect the health of the mother and the pregnancy. This section will explore the role of psychological support, including counseling, stress management techniques, and emotional coping strategies, in improving maternal well-being and pregnancy retention. The thesis will investigate whether psychological interventions, such as cognitive-behavioral therapy (CBT)

and support groups, can reduce the anxiety and depression associated with early pregnancy loss and increase the likelihood of a positive pregnancy outcome.

Monitoring and Follow-Up Care: Ongoing monitoring of women at risk of miscarriage is essential for early intervention and managing complications. This study will examine the role of serial ultrasound scans, hormone level monitoring, and clinical assessments to track fetal development and maternal health. Best practices in follow-up care, including the frequency of visits, types of tests, and patient education, will be discussed, with a focus on improving patient compliance and satisfaction. **Personalized and Risk-Based Approach:** This research will emphasize the importance of personalized care tailored to the individual needs of each patient. A risk-based approach, wherein management strategies are customized based on a woman's specific risk factors and gestational progress, will be presented as a key component in optimizing care. The thesis will propose guidelines for healthcare providers on how to assess risk levels effectively and choose the most appropriate interventions to support pregnancy continuation. **Clinical Guidelines and Best Practices:** A comprehensive review of national and international guidelines (e.g., ACOG, RCOG) on the management of threatened miscarriage will be included. The thesis will identify any discrepancies or gaps in current practice and propose ways to standardize care across different healthcare settings. Evidence from clinical trials and observational studies will be used to inform the development of best practices that balance medical intervention with the natural course of pregnancy, emphasizing the importance of a multidisciplinary approach involving obstetricians, endocrinologists, and mental health professionals.

Conclusion:

This thesis will provide a holistic approach to the management of women at risk of miscarriage before 21 weeks of gestation, integrating medical, pharmacological, and psychological strategies. By optimizing early detection, pharmacological intervention, psychological care, and monitoring, it aims to improve maternal and fetal outcomes, reduce the incidence of miscarriage, and support the overall health and well-being of pregnant women facing this challenge. Ultimately, the thesis will contribute to the development of evidence-based, individualized management plans that can be implemented in clinical practice to improve pregnancy retention rates and enhance patient care.