SPECIFIC CLINICAL COURSE AND EARLY DIAGNOSIS OF UPPER RESPIRATORY TRACT INFLAMMATORY COMPLICATIONS IN PREGNANT WOMEN WITH COVID-19

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Abstract *The clinical interaction between COVID-19 and pregnancy creates a complex diagnostic environment, especially regarding upper respiratory tract (URT) pathologies[1]. This study aims to delineate the specific clinical phenotypes and identify early diagnostic markers for URT complications in this vulnerable group. Based on a clinical study of pregnant patients, we found that the inflammatory process in the URT under the influence of SARS-CoV-2 exhibits an accelerated progression, often masking bacterial superinfections[2]. The integration of endoscopic screening and specific biochemical markers is essential for early detection and prevention of maternal-fetal complications[3].*

Introduction The gestational period involves physiological adaptations—including upper airway mucosal edema, hypervascularity, and altered cellular immunity—that predispose women to severe respiratory infections. The emergence of COVID-19 has added a layer of complexity to the management of these patients. Inflammatory diseases of the URT, such as acute rhinosinusitis and pharyngitis, often present with atypical features in pregnant women infected with SARS-CoV-2. Understanding the specific clinical course is not only a matter of maternal comfort but a necessity to prevent systemic inflammatory responses that could jeopardize the pregnancy.

Methods A prospective analysis was performed on 55 pregnant women diagnosed with COVID-19 (confirmed by RT-PCR) who exhibited symptoms of URT involvement.

Clinical Observation: Monitoring of nasal patency, character of discharge, and pain localization.

Diagnostics: Rigid and flexible endoscopy of the nasal cavity and nasopharynx was performed to evaluate the state of the osteomeatal complex.

Laboratory Correlation: Systematic tracking of C-reactive protein (CRP) and complete blood counts with differential.

Control Group: Data were compared with non-pregnant COVID-19 patients of similar age.

Results and Discussion The study identified several "specific clinical hallmarks" in the study group:

Rapid Transition: The progression from initial viral congestion to purulent rhinosinusitis occurred within an average of 3.4 days, significantly faster than the 5.8-day average in the control group.

"Masked" Pain Syndrome: Due to the systemic myalgia and headaches associated with COVID-19, localized sinus pain was often overlooked by patients, leading to late-stage diagnoses.

Endoscopic Markers: 74% of patients showed significant hypertrophy of the inferior turbinates and "glassy" edema of the middle meatus, which served as an early visual marker of obstructive inflammation.

Laboratory findings indicated that a sharp rise in the neutrophil-to-lymphocyte ratio (NLR) preceded the clinical manifestation of purulent discharge by 24–48 hours. This suggests that NLR can be utilized as a "red flag" for early diagnostic intervention.

Conclusion The clinical course of URT inflammatory complications in pregnant women with COVID-19 is characterized by high intensity and a rapid shift towards bacterial forms. Early diagnosis should not rely solely on patient

complaints but must incorporate routine endoscopic monitoring and the analysis of inflammatory ratios. Such a proactive diagnostic strategy allows for localized treatment, reducing the need for systemic antibiotic therapy and minimizing potential adverse effects on the fetus.

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