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General Medicine

A STUDY ON CLINICAL FEATURES AND OUTCOME IN PREGNANT WOMEN WITH COVID 19 AN OBSERVATIONAL STUDY.

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ABSTRACT **BACKGROUND**: COVID 19 disease caused by SARS COV-2 virus has a severe impact on pregnant women, causing more morbidity and mortality than the general population. Even though the clinical presentation is similar to most individuals being asymptomatic, there is no reduction in mortality in pregnant women. Being an observational study, the individuals with risk factors have developed severe disease compared to those without risk factors.

METHODOLOGY: We did an observational study retrospectively in 100 covid positive antenatal women admitted in the tertiary care covid hospital, Vijayawada, Andhra Pradesh from, March 2021 to May 2021. This study considers the mode of presentation, severity, trimester of pregnancy, age group, co-morbidities and outcome of all individuals.

RESULTS: In the study, most of the pregnant women are asymptomatic at the time of presentation (77%), with fever(24%), breathlessness(18%) are predominant. The mean age was 23.97 years, with 64.7 % in a mild stage of disease at the presentation time. Most of the pregnant women belonged to the third trimester, and overall mortality was 11% in this study and 89% discharged without any complication.

CONCLUSION: Pregnant women are equally valuable vulnerable to COVID 19 disease when compared to the general population. The pattern of the clinical presentation was similar, but most are without symptoms, and some individuals with co-morbidities are landing in a severe stage of the disease.

KEYWORDS : Covid19, pregnant women, clinical presentation, co-morbidities, outcome.

INTRODUCTION:

Covid 19 disease, by SARS COV 2 virus, affects most individuals health, which causes increased mortality and morbidity. It not only affects the general population but also showing its severity in a pregnant woman. Even though the manifestations of covid in pregnant women are similar to that of the typical population, the delayed presentation to hospital, having co-morbidities leading to poor outcome in the group. During pregnancy, most women are prone to get infectious diseases(1)mainly bacterial and viral, due to changes in the immune responses in the body, leading to more obstetrical complications and adverse perinatal outcomes. (2)(3). Our previous experiences with ZIKA and H1N1 influenza virus suggest that infectious diseases will have difficulties in pregnancy(4) and its outcome. Most pregnant women tested positive even though most of them are asymptomatic. These individuals with extensive symptoms are developing the severe stage of the disease.

MATERIALS AND METHODS:

An observational study done in a study group of 100 pregnant individuals with RTPCR confirmed COVID 19 disease, admitted in tertiary covid hospital, government general hospital Vijayawada, Andhra Pradesh, from March 2021 to May 2021, which is a retrospective study. The study approved by the institutional ethics committee of the government Siddhartha medical college, Vijayawada.

INCLUSION CRITERIA: we included pregnant women with RTPCR POSITIVE status in the study.

EXCLUSION CRITERIA: we excluded Pregnant women with RTPCR NEGATIVE status from the study.

RESULTS:

We considered multiple variables for the study with a focus on clinical features and outcome. The clinical presentation was heterogeneous, with varying frequency of different symptoms. In 100 patients, 62% patients did not have any symptoms. In individuals with symptoms, fever (28%), breathlessness (18%) are predominant symptoms followed by cough, running nose, sore throat, loose stools. Some pregnant women rarely presented with neurological involvement in the form of cerebrovascular event. In this study, the mean age was 23.97 years, with a majority between 21years to 25 years of age. Out of 100 pregnant individuals, 64% belong to mild stage, 22% to moderate stage and 14% to severe stage of the disease. Co-morbidities are not seen in 70% of pregnant women, while 15% had gestational diabetes, 6% had hypertension, 3% had gestational diabetes mellitus and pregnancy-induced hypertension and, 6% had hypothyroid. 15 % belonged to the first trimester, 20 % and 75 % belong to the second and third trimester, respectively.

CLINICAL FEATURES

ASYMPTOMATIC 62%
FEVER 24%
BREATHLESSNESS 18%
COUGH 17%
RUNNING NOSE 7%
SORETHROAT 5%
NEUROLOGICAL INVOLVEMENT 2%

TRIMESTER

1ST TRIMESTER ----- 18
2ND TRIMESTER ----- 17
3RD TRIMESTER ----- 75

AGE IN YEARS

19-20 ------- 13
21-25 --------52
26-30 --------28
31-35 --------07

SEVERITY OF DISEASE

MILD 64%
MODERATE 22%
SEVERE 14%

CO-MORBIDITY

NO CO-MORBIDITY – 77
DM 10
HYPOTHYROID 06
HYPERTENSION 04
DM AND HYPERTENSION 03

OUTCOME

DISCHARGE 89
DEATH 11

DISCUSSION:

In pregnancy, the vulnerability to infections was increased (5)due to the putting down of cell-mediated immunity, leading to an immunocompromised state with maternal immunity highly adapted to fetal antigens. (6)Due to the immunocompromised state, SARS COV2

infection was more severe, leading to more significant inflammation in the body, enhancing the cytokine system, thus landing many patients in multiorgan failure. This uncontrolled inflammation was resulting in severe covid 19 disease, contributing to mortality and morbidity. As there is a limitation of total lung capacity, inability to clear chest secretions, making pregnant women defenceless against respiratory infections. (7)In the majority of covid19 patients, the disease was associated with more thrombotic complications(8). Increased thrombin production leads to a hyper-coagulable state in pregnant women, showing increased intravascular inflammation(9), contributing to increased risk of thromboembolic events and more mortality. A case report of a pregnant woman having a large pulmonary artery embolism, basilar artery embolism during 29 weeks gestational age when she was affected with covid 19 disease and succumbed to death(9). To differentiate the severity of an infectious disease in pregnant women from non pregnant women, there was a systematic review done in the corresponding age group(10). Some similar studies show the severe impact of SARS COV 2 virus infection in pregnancy compared with the evidence of seasonal influenza where there are higher rates of miscarriages. (11). A large cohort study from USA shows that pregnancy was associated with escalating the possibility of hospitalisation, ICU admission, need for mechanical ventilation(12) with no reduction in mortality. The studies from London and New York showed that 88% of RTPCR positive pregnant women are asymptomatic when tested for admission to give birth(13).

CONCLUSION:

SARS COV 2 virus causing covid 19 infection shows its effects in pregnant women in a similar way to the general population, with no reduction in mortality, and there was the increased vulnerability of pregnant women to covid 19, more number of clinical trials with multiple tested therapeutic options helps in reducing mortality. However, chances of asymptomatic individuals will progress to a severe stage of disease in women with co-morbidities. So early presentation helps to reduce mortality.

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