ejpmr, 2022,9(7), 426-428

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

ACUTE CHOLECYSTITIS AND PREGNANCY: PRESENTATION AND OUTCOME

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Article Received on 09/05/2022 **Article Revised on 30/05/2022** **Article Accepted on 20/06/2022**

ABSTRACT

Background: Acute cholecystitis is the commonest general surgical problem seen in pregnant females. Prompt evaluation and management is important to avert maternal and fetal morbidity and mortality. The aims and objectives of this study were to study the presentation and management of acute cholecystitis in pregnancy. **Methods:** Ours was a prospective cohort study of 100 pregnant patients presenting with a non-obstetric surgical emergency over a period of 1 year in a tertiary care hospital of a developing area. **Results:** The mean age of the patients was 28.24 ± 3.16 years with most of them being in the age group of 25 - 30 years. Seventy-one (71%) patients hailed from the rural areas. Fifty-seven (57%) patients were primigravida. Majority of patients presented in the 2nd trimester [46 (46%) patients]. Ultrasonography was used as the diagnostic modality of choice in 99 (99%) patients. Acute cholecystitis was the commonest surgical emergency in our study group accounting for 32% of all the emergencies. All the patients were managed conservatively on intravenous antibiotics, analgesics and fluids. The mean hospital stay was 3.16 ± 1.27 days. None of the patients required surgical or any other intervention. **Conclusion:** Acute cholecystitis is a common surgical emergency encountered in the pregnant females but usually responds well to conservative therapy. Utmost cooperation between the surgeon and the obstetrician is imperative.

KEYWORDS: Non-obstetric; Surgical; Pregnancy; Cholecystitis; Operative; Acute.

INTRODUCTION

About 1 in 500 pregnancies report the occurrence of acute abdomen[1], and around 0.2% to 1.0% of women require general surgical opinion for a non-obstetric problem.[2] Evaluation, work-up, and management of pregnant patients with general surgical problems are of paramount importance for the welfare of mother and the embryo. Acute appendicitis, acute cholecystitis, and bowel obstruction account for the majority of the abdominal pain syndromes, which require surgical intervention. The approach is generally the same as that for the non-pregnant patient, but pregnancy may mask some of the typical presenting symptoms, leading to delayed diagnosis.

Pregnancy causes many changes that can affect the clinical presentation of acute abdomen. The enlarging gravid uterus compresses and displaces the surrounding viscera.[3-5] These changes, along-with a hesitancy to perform appropriate radiographic tests, pose a great challenge in the evaluation of pregnant patients.[6] Acute abdominal pain can arise from several systems: gastrointestinal, urogenital, gynecologic, or obstetric. The commonest general surgical problem complicating pregnancy has been variously reported as acute cholecystitis.[7-11] The aims and objectives of this study were to study the presentation and management of acute cholecystitis in pregnancy.

METHODS

Ours was a prospective observational study conducted in the Department of Surgery, New City Hospital Srinagar in collaboration with the Department of Obstetrics and Community Medicine of the same hospital. The study was carried out from May 2021 to April 2022. During the study period, 100 pregnant patients presenting with non-obstetric surgical emergencies complicating their pregnancy and were studied. The patients were subjected to a detailed history and physical examination. Baseline blood investigations like complete blood count, kidney function test and liver function were done in all the patients. Ultrasonography was done to assess the fetal wellbeing and to aid in the diagnosis of the general surgical problem. Magnetic Resonance Imaging was used as a second line diagnostic modality when ultrasound was inconclusive. The patients with obstetric emergencies were excluded from the study.

A written and informed consent was taken from the patients for this study after obtaining ethical clearance from the institutional ethical committee. This study posed no financial burden on the patients. The recorded

data was compiled and entered in a spreadsheet (Google Sheets) and then exported to SPSS Version 22.0 (IBM Inc., Chicago, Illinois, USA). Continuous variables were expressed as Mean ± SD and categorical variables were summarized as frequencies and percentages.

RESULTS

The mean age of the patients was 28.24 ± 3.16 years with most of them being in the age group of 25 - 30 years. Seventy-one (71%) patients hailed from the rural areas. Fifty-seven (57%) patients were primigravida. Majority of patients presented in the 2nd trimester [46 (46%) patients]. Ultrasonography was used as the diagnostic modality of choice in 99 (99%) patients. Acute cholecystitis was the commonest surgical emergency in our study group accounting for 32% of all the emergencies and was followed by acute appendicitis (16%).

Out of the 32 patients with acute cholecystitis, the most consistent presentation was colicky pain in the right hypochondrium and was seen in all the patients. This was followed by nausea and vomiting in 22 (68.75%), and fever in 11 (34.38%) patients. Jaundice was the least common symptom and was seen in only 6 (18.75%) patients. The diagnosis was established in all the cases by clinical examination and was confirmed by ultrasonography. One (3.125%) patient had sludge in common bile duct. All the patients were managed conservatively on intravenous antibiotics, analgesics and fluids. The mean hospital stay was 3.16 ± 1.27 days. None of the patients required surgical or any other intervention. All the patients were subjected to elective cholecystectomy after the completion of pregnancy.

DISCUSSION

Treatment of acute cholecystitis in the gravid patient cannot be generalized and requires a tailored approach where the safety of mother and fetus has to be put under consideration. The general consensus is on the conservative management but there have been reports of managing acute cholecystitis by laparoscopic cholecystectomy during pregnancy. The approaches to management of acute cholecystitis in the pregnant patient have been clarified in the literature, but such data are lacking from our subset of population.[7-11] The current study aimed to bridge this knowledge gap.

While in general the principal of managing a pregnant woman with acute cholecystitis remain the same as those governing the treatment of non-pregnant patient, some important differences are present and can pose problems. The mother should always take precedence because treating the mother will usually benefit the fetus as well as the mother. Cooperation between a maternal—fetal medicine, surgeon, obstetrician and a preventive specialist maximizes the benefits of diagnosis and therapy for the mother and the fetus.[9-12]

Acute cholecystitis was the most common surgical emergency and accounted for 32% of all the surgical emergencies in our study. Cholelithiasis was present in all the cases of acute cholecystitis. This was comparable with the study done by Bouyou J et al.[13] None of our patients had severe acute cholecystitis as per the Tokyo guidelines and as such conservative management was chosen as the modality of choice. One of our patients had sludge in the common bile duct, but did not require any intervention for it.

After successful conservative management, all the patients were subjected to elective cholecystectomy after completion of pregnancy. All the patients who required an elective caesarian section were planned to undergo laparoscopic cholecystectomy in the same sitting. This was successfully done in twelve patients. Our results are consistent with those published by Majid Mushtaque et al in 2019.[14] The other twenty patients were subjected to elective laparoscopic cholecystectomy after complete involution of uterus was achieved.

CONCLUSION

Acute cholecystitis is a common surgical emergency encountered in the pregnant females but usually responds well to conservative therapy. The surgeon should try to weigh the pros and cons of watchful waiting vis-à-vis surgical intervention in these patients giving due consideration to the maternal as well as fetal wellbeing. Utmost cooperation between the surgeon and the obstetrician is imperative for effective management.

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