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Implications of Non-Operative Management for Symptomatic Cholelithiasis in Pregnancy

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Abstract
Symptomatic cholelithiasis during pregnancy poses challenges in management due to concerns regarding fetal safety and maternal well-being. While non-operative approaches are often preferred, their efficacy in reducing hospitalizations remains unclear. study was conducted at MGM Medical College and Hospital, Jamshedpur, from January 2022-December 2023. Sixty pregnant women with symptomatic cholelithiasis were included in the study. Data regarding patient demographics, clinical presentation, management strategy, and hospitalizations were collected and analyzed. Among the 60 pregnant women with symptomatic cholelithiasis, the average age was 28 years. The majority presented with biliary colic (80%) and were managed conservatively with dietary modifications and symptomatic treatment. However, despite non-operative management, 45% of the patients required hospitalization due to recurrent symptoms or complications such as acute cholecystitis or choledocholithiasis. The average number of hospitalizations per patient was 1.8, with an average duration of 4 days per admission Non-operative management of symptomatic cholelithiasis in pregnancy, although commonly practiced, is associated with frequent hospitalizations. This suggests that while conservative measures may provide temporary relief, they may not adequately prevent disease progression or complications necessitating hospital care. Further research is warranted to optimize the management strategies for this patient population and reduce the burden of hospitalizations.

INTRODUCTION

Symptomatic cholelithiasis, characterized by the presence of gallstones causing biliary colic or complications such as acute cholecystitis or choledocholithiasis, is a common gastrointestinal disorder during pregnancy[1]. The physiological changes associated with pregnancy, including increased levels of estrogen and progesterone, alterations in gallbladder motility and changes in lipid metabolism, predispose pregnant women to the development or exacerbation of gallstone disease[2,3].

Management of symptomatic cholelithiasis in pregnancy poses a clinical dilemma, balancing the need for effective symptom control with concerns regarding fetal safety and maternal well-being. Non-operative approaches, including dietary modifications, analgesia, and supportive care, are often favored to avoid the potential risks associated with surgical interventions[4]. However, the efficacy of conservative management in reducing the need for hospitalizations remains uncertain.

Previous studies have reported variable outcomes with non-operative management of symptomatic cholelithiasis in pregnancy, with some suggesting a high rate of hospital admissions due to recurrent symptoms or complications[5,6]. Understanding the effectiveness of conservative strategies in this population is crucial for optimizing clinical management and improving patient outcomes.

This retrospective study aimed to evaluate the frequency of hospitalizations among pregnant women with symptomatic cholelithiasis managed non-operatively at MGM Medical College and Hospital, Jamshedpur, over a two-year period. By examining the real-world outcomes of conservative management, this study seeks to contribute to the evidence base guiding clinical decision-making for this vulnerable patient population.

MATERIALS AND METHODS

Study Design: This retrospective study was conducted at MGM Medical College and Hospital, Jamshedpur, from January 2022-December 2023.

Participants: The study included pregnant women diagnosed with symptomatic cholelithiasis who presented to the obstetrics and gynecology department during the study period.

Data Collection: Relevant data were extracted from medical records, including patient demographics (age, gravidity, parity), clinical presentation (symptoms, gestational age at presentation), diagnostic investigations (ultrasound findings), management strategy (conservative or surgical) and hospitalizations related to symptomatic cholelithiasis.

Non-Operative Management: Conservative management strategies included dietary modifications (low-fat diet), analgesia (paracetamol), antiemetics, and intravenous fluids as required. Patients were closely monitored for symptom resolution and complications.

Hospitalization Criteria: Hospitalizations related to symptomatic cholelithiasis were defined as admissions for acute cholecystitis, choledocholithiasis, or intractable pain requiring intravenous analgesia or hydration.

Statistical Analysis: Data were analyzed using descriptive statistics. Continuous variables were expressed as mean±standard deviation (SD) or median (interquartile range), while categorical variables were presented as frequencies and percentages.

Ethical Considerations: The study protocol was approved by the Institutional Review Board of MGM Medical College and Hospital. Patient confidentiality was maintained throughout the study and informed consent was waived due to the retrospective nature of the study.

RESULTS AND DISCUSSIONS

Sixty pregnant women with symptomatic cholelithiasis were included in the study. The average age of the participants was 28 years (SD±4.5 years). The majority of patients presented with biliary colic (80%), while the remaining presented with complications such as acute cholecystitis or choledocholithiasis.

Of the 60 patients, 27 (45%) required hospitalization during the study period due to recurrent symptoms or complications related to cholelithiasis. The average number of hospitalizations per patient was 1.8, with an average duration of 4 days per admission.

Overall, non-operative management of symptomatic cholelithiasis in pregnancy was associated with a considerable rate of hospitalizations, indicating the need for close monitoring and potentially reconsidering management strategies in certain cases.

Symptomatic cholelithiasis during pregnancy presents a clinical challenge due to concerns regarding the safety of both the mother and the fetus. Non-operative management strategies are often preferred to avoid the potential risks associated with surgical interventions. However, our study findings highlight that despite conservative measures, a significant proportion of pregnant women with symptomatic cholelithiasis required hospitalizations.

The high rate of hospitalizations observed in our study (45%) underscores the limitations of

Table 1 summarizes the demographic characteristics and clinical presentation of the study participants.

Characteristic	Value
Age (years), mean ± SD	28 ± 4.5
Gravidity	
- Primigravida	30 (50.0%)
- Multigravida	30 (50.0%)
Parity	
- Nulliparous	35 (58.3%)
- Multiparous	25 (41.7%)
Clinical Presentation	
- Biliary colic	48 (80.0%)
- Complications	12 (20.0%)

Table 2 presents the details of hospitalizations among the study participants.

Hospitalization Details	Number of Cases
Total hospitalizations	27
Average hospitalizations per patient	1.8
Average duration per admission (days)	4

non-operative management in effectively controlling symptoms and preventing disease progression during pregnancy. This finding is consistent with previous studies reporting variable outcomes with conservative approaches[1,2]. Ogunnaike *et al*. also noted a considerable rate of hospital admissions among pregnant women with gallstone disease[3]. These findings collectively suggest that while non-operative management may provide temporary relief, it may not adequately address the underlying pathology or prevent complications necessitating hospital care.

The reasons for hospitalizations among pregnant women with symptomatic cholelithiasis are multifactorial. Recurrent symptoms, such as biliary colic, may require hospitalization for pain management and supportive care. Additionally, complications such as acute cholecystitis or choledocholithiasis may develop despite conservative measures, necessitating urgent medical intervention. The physiological changes associated with pregnancy, including increased estrogen levels and altered gallbladder motility, may exacerbate gallstone-related symptoms and predispose to complications[4].

Our study has several limitations that warrant consideration. Firstly, the retrospective design limits the ability to establish causality and may introduce bias in data collection. Secondly, the sample size was relatively small, which may affect the generalizability of the findings. Future prospective studies with larger cohorts are needed to validate our findings and elucidate the factors influencing the outcomes of non-operative management in pregnant women with symptomatic cholelithiasis.

CONCLUSION

In conclusion, our study highlights the frequent hospitalizations associated with non-operative management of symptomatic cholelithiasis during pregnancy. While conservative approaches may provide symptomatic relief, they may not adequately prevent disease progression or complications. Clinicians should carefully weigh the risks and benefits of non-operative management and consider alternative strategies in cases at high risk of complications.

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