



APPENDICITIS IN PREGNANCY : OUR CLINICAL EXPERIENCE AT A TERTIARY CARE CENTRE

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ABSTRACT

Objective: Acute appendicitis is a common surgical condition presented to emergency. In this study we evaluated the clinical presentation, management and outcome of acute appendicitis complicating pregnancy at a tertiary care centre.

Material And Methods: A total of 20 cases of pregnant women who were diagnosed as a case of acute appendicitis were studied from January 2018 to December 2020.

Results: Total number of patients diagnosed with acute appendicitis were 20. There were 10 (50%) patients in first trimester, 6 (30%) in second and 4 (20%) in the third trimester. Abdominal pain was the most common symptom seen in all patients. 12 (60%) patients were multigravida whereas 8 (40%) patients were primigravida. Duration of abdominal pain was 6 hours to 5 days with median of 30 hours. Right lower quadrant was the most common site of pain. Rebound tenderness was seen in 14 (70%) patients. Total leucocyte was raised in 14 (70%) cases. Ultrasound was done in all patients showing viable fetus and features of acute appendicitis in 12 (60%) cases. Surgery was done in 16 (80%) cases. Midline laparotomy was done in 3 patients whereas 4 (20%) patients were managed conservatively with antibiotics. Postoperative tocolytics were given in 6 patients. Postoperative complications such as wound infections seen in 5 cases and pelvic abscess in 1 case. Fetal loss was seen in 2 (10%) cases.

Conclusion: Diagnosis of acute appendicitis during pregnancy can be difficult due to anatomical and biochemical changes during pregnancy. Correct diagnosis can be achieved by taking proper history, clinical examination and relevant investigations. Surgery remains the treatment of choice.

KEYWORDS : Acute appendicitis; pregnancy; appendectomy.

INTRODUCTION:

The most common non-obstetrical surgical emergency in pregnancy is acute appendicitis. It affects about 1 in 1500 patients^{1,2}. It can be seen in all the trimesters but most commonly seen in the second trimester³. Appendicitis presents with pain in the periumbilical area then shifting into right iliac fossa. Anorexia, nausea and vomiting can be seen after the onset of pain. Fever and leucocytosis also develop later. Pregnant women are less likely to have all the classical manifestations. Mild leucocytosis can be normally seen in pregnant women. It can be upto 16900 cells/ml in the last trimester to upto 29000 cells/ml during labor along with shift to left. Delayed diagnosis is due to physiologically anatomical and biochemical changes during pregnancy. Higher incidence of complications is due to delayed presentation and diagnosis. Imaging is recommended when there is atypical presentation. The main finding on ultrasound is the presence of blind ended tubular structure in the right lower quadrant with a maximum diameter more than 6mm. Early diagnosis and treatment is important to reduce the complications and also to reduce the negative appendectomy rate. These patients are also at risk for premature births, miscarriages and caesarean sections⁴. In this paper we investigated the pregnant women diagnosed as a case of acute appendicitis.

MATERIALS AND METHODS:

This study was conducted in the Department of Surgery Government Medical College Jammu. Data regarding patients demography, presenting complaints, signs and symptoms, investigations, tocolytic usage, treatment and postoperative complications was collected and recorded in a detailed proforma and analysed.

RESULTS:

Total number of patients diagnosed with acute appendicitis were 20. Mean age at presentation was 25 years. There were

10 (50%) patients in first trimester, 6 (30%) in second and 4 (20%) in the third trimester. 12 (60%) patients were multigravida whereas 8 (40%) patients were primigravida. Abdominal pain was the most common symptom present in all the patients. Duration of abdominal pain was 6 hours to 5 days with median of 30 hours. Loss of appetite, nausea and vomiting was seen in 35%, 40% and 20% cases. Right lower quadrant was the most common site of pain in 15 (75%) patients, 2 (10%) patients with right upper quadrant pain and generalized peritonitis in 3 (15%) patients. Rebound tenderness was seen in 14 (70%) patients. Total leucocyte count was raised in 14 cases with a median count of 12500/cumm. Ultrasound was done showing viable fetus in all patients and features of acute appendicitis in 12 (60%) cases. Surgery was done in 16 (80%) cases. Grid-iron was the preferred incision in 13 cases. Midline laparotomy was done in 3 patients. 4 (20%) patients were managed conservatively with antibiotics. Postoperative tocolytics were given in 6 patients. Postoperative complications in the form of wound infections in 5 cases and pelvic abscess in 1 case and all were managed conservatively. Fetal loss was seen in 2 (10%) cases.

DISCUSSION:

Acute appendicitis is the most common non-obstetric indication for surgery. It is seen in about 1 in 1500 pregnancies². Diagnosis in non-pregnant patients is based on clinical judgement while it is difficult for pregnant cases due to changes in anatomical and biochemical parameters^{5,6}, as a result its diagnosis is delayed leading to fetomaternal risk. Timely diagnosis is important to minimize the complications associated with appendicitis. Acute appendicitis is commonly seen in the second decade. Total number of cases included in the study were 20. In our study most patients were in the first trimester 10 (50%) which are comparable to the study conducted by Kim et al. Cho et al observed that it is seen more in the third trimester, Lee et al reported no difference was seen

. Busra Burcu et al reported 57% cases in first trimester , 23.8% in the second trimester and 19% cases in the third trimester ⁸. Pain started in the periumbilical area then shifted to right lower quadrant is pathognomic. 12 cases were multigravida whereas 8 cases were primigravida. Kazim SF also found 66% cases were multigravida in their study ⁹. In this study pain in the right lower quadrant and right upper quadrant was seen in 15 (75%) and 2 (10%) patients. Diffuse peritonitis was seen in 3 cases. Present study shows results comparable with the study conducted by Kazim SF et al which shows pain in RLQ, RUQ and diffuse peritonitis in 87%, 5% and 8% cases. Baer et al in his study found that pain in right upper quadrant is due to upward displacement of appendix ¹⁰. Physiological nausea vomiting and loss of appetite is present in pregnancy so Alvarado scoring cannot be used. Abdominal tenderness was the most common and reliable sign. In our study anorexia, nausea and vomiting was seen in 35 % , 40% and 20%. Busra et al found anorexia, nausea and vomiting in 19%, 52% and 14% respectively. Our results are comparable to the study conducted by Kazim SF et al which shows these symptoms in 31%, 21% and 15% cases. In present study leucocytosis was seen in 14 patients . In out study median WBC COUNT was 12500/cumm. Kim et al found that total leucocyte count more than 16000/cumm raise suspicion of perforation. Leucocytosis can be normally seen during pregnancy with high neutrophilic count. So it is not considered as a reliable indicator of appendicitis. Ultrasound was the most common diagnostic tool. It has 36-100% sensitivity rate and 33-99% specificity rate. Magnetic resonance imaging can also be used safely and is gold standard when not diagnosed clinically and by ultrasonography. Out of 20 patients 4 (20%) were managed conservatively by antibiotics. Surgery was done by grid-iron incision in 13 patients and laparotomy was done in 3 cases. Complications in the form of wound infections (5 cases) and pelvic abscess (1case) was seen. Fetal loss was seen in 2 cases (10%). Mc Gory ML et al found that fetal loss was seen in 2% of uncomplicated appendicitis and in case of peritonitis it is seen in 6% cases ¹¹. Babaknia A et al reported fetal loss of upto 36% in case of perforation ¹².

CONCLUSION:

Diagnosis of acute appendicitis during pregnancy can be difficult due to anatomical and biochemical changes during pregnancy. Correct diagnosis can be achieved by taking proper history, clinical examination and relevant investigations. Surgery remains the treatment of choice.

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