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# ACUTE APPENDICITIS WITH PERFORATION IN 3RD TRIMESTER PREGNANCY : A CASE REPORT

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**ABSTRACT** Acute appendicitis is the most common surgical complication in pregnancy. Its incidence is 1 per 1500 which is similar to the one in the non-pregnant population. The diagnosis of acute appendicitis is more challenging in pregnancy. Up to 23% of appendicectomies performed during pregnancy show normal appendices( versus 18% in non-pregnant population p<0.05). Suspected cases of acute appendicitis in pregnancy are considered surgical emergencies due to the potentially devastating outcomes for both mother and unborn child if the appendix perforates. Current report describes the case of an 22 year-old G3P1L1A1, at 34 weeks who was hospitalized with complaint of sudden onset of localized, non radiating pain at the suprapubic and right iliac fossa regions together with vomiting and fever. Open appendicectomy was performed. Acute appendicitis in pregnancy requires an attentive assessment of clinical manifestation and laboratory findings including radiological diagnosis. Early action is a better option to control negative maternal and fetal outcomes.

Multiple investigations and/or false diagnoses can delay surgery and increase the risk of appendix perforation, which is associated with higher rates of maternal morbidity (52% versus 17% non-perforated appendicitis) and foetal mortality (24% versus 7%) [4]. Conversely, performing an appendectomy for a false diagnosis of appendicitis is associated to at least similar rates of foetal loss and preterm delivery than regular appendectomies. Such complications may be related to the surgery itself and/or to the misdiagnosed disease [2, 7, 8].

Once the decision to operate has been made, the operative technique, open or laparoscopic surgery, must be decided. The laparoscopy is most often recommended during the first two trimesters, as alternative diagnoses can be evaluated in case of normal appendix [9]. During the third trimester, guidelines are less clear. Many speak for the open approach, especially after the 26th-28th week of amenorrhea, but an increasing number of publications now report series of successful laparoscopic appendectomies during the third trimester [7, 9].

**KEYWORDS** : Acute Appendicitis, Open appendicectomy, 3rd trimester, Outcomes, Pregnancy, Perforation, Preterm labour

**CASE REPORT-**

A 22 yrs old female, G3P1L1A1 married since 3yrs, with 8 ½ months of amenorrhea, resident of Taluka- Koregaon, Satara with chief complaints of pain in abdomen in right iliac fossa since 24hours, 3 episodes of vomiting and fever since 12 hours.

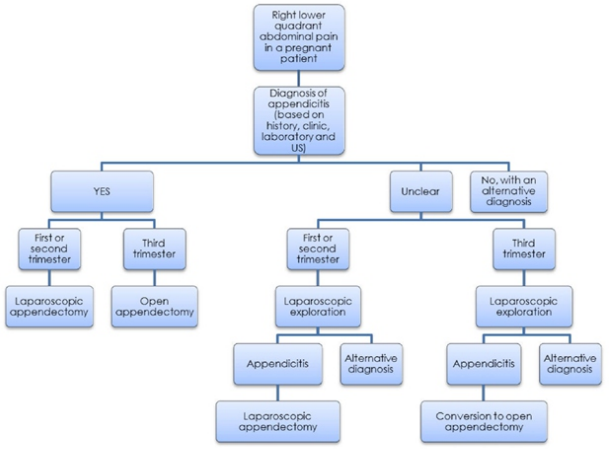
She was referred from Civil hospital, Satara in view of 34wks pregnancy with USG suggestive of acute appendicitis with early signs of appendicular perforation.

On examination she was afebrile, P-110/min, BP-110/70mmHg, P/A- tenderness in RIF and subhepatic space.

**Hemoglobin-** 9.4; Platelet count -245; TLC- 16,000

Urgent surgery reference was done. Pateint was transferred to surgery ward. High risk consent was taken and patient was planned for open appendicectomy. As perforated appendix can lead to increased chances of mortality or fetal demise or may lead to preterm labour, decision for open appendicectomy was taken in good view of patient after discussing these pros and cons with patient's relatives. Pateint underwent open apendicectomy.

Histopathology report: shows acute ulcerative appendicitis with peritonitis No transfusion was further required. The mother and new-born were discharged from hospital without further complication.



## DISCUSSION-

While some studies have demonstrated that the laparoscopic approach is feasible until 32-34 weeks of amenorrhea, conversion rates are higher and operative times longer [9]. This approach should, therefore, not be favoured during the third trimester. This said, we would still perform a laparoscopy during the third trimester in case of unclear pre-operative diagnosis. Once the intra-operative diagnosis of appendicitis has been made, we would favour a Mc Burney conversion (laparoscopy will guide the location of the open incision). We acknowledge however the difficulty of this decision, balancing a well progressing laparoscopic appendectomy, the potential comp lications to come and the safer profile of the open procedure.

Patient was presented with the most common symptoms of acute appendicitis which are localiz ed abdominal pain at suprapubic and right iliac fossil areas, vomiting, anorexia, together with positive leukocytosis and without UTI symptom s[4]. Both obstetric and gynecologic conditions can lead to abdominal pain, with appendicitis resemblance[3, 6]. A systematic history and a watchful physical assessment should lead the clinician to formulate a differential diagnosis that is appropriate for the patient. One study demon strated that appendicitis occurred in appro ximat ely half of their clinical symptoms are same like pregnancy, for example; ovarian cysts, mesenteric adenitis, fibromyoma uteri, varicose veins in the parametria, ileus, and salpingitis [2].

Laboratory assessment may not be helpful, like leukocytosis in pregnancy can be high (16000 cells/ml) along with bandemia which is not a clear indicator for appendicitis. Furthermore, during labor, leukocytes value may rise to 30,000 cells/mL, and not all pregnant patients with appendicitis have leukocytosis. It is not a reliable marker, as up to 33% of cases may have a leukocyte count greater than 15,000/mm[6].

Early surgical intervention (within 24 hours), has shown to give imperative outcomes and reduce the maternal and fetal morbidity and mortality. Surgical delays have been associated with appendiceal perforation and significant fetal loss and cases of maternal mortality[6]. Various tocolytic agents are used prophylactically for uterine irritability; however their efficacy has not been established[2, 3].

Fetal health complicates the management of the gravida patient with acute abdominal pain. When appendicitis is suspected, timely obstetric as well as general surgical consult is essential. Laparoscopic surgery in the pregnant patient has not been generally accepted in the 2nd and or 3rd trimester due to the apprehension regarding fetal wastage, the effects of carbon dioxide on the developing fetus and the long-term effects of this exposure[8].

Usage of antibiotic either pre or post surgical phase may expose the developing fetus to potentially teratogenic substances[5]. Pregnancy related pharmacodynamic changes result in reduced maternal plasma levels of antibiotics. Second generation cephalosporins are used for prophylac tic purpose in majority of cases.
Furthermore, ampicillin or cephalosporins are used in combination with metronidazole in cases with perforated or gangrenous appendix[3].

## CONCLUSION-

While more difficult in a pregnant woman, the diagnosis of acute appendicitis should be as prompt as possible in order to minimize maternal morbidity and foetal mortality. During the third trimester we recommend open appendicectomy or a conversion to an open appendectomy once the intra-operative diagnosis of appendicitis has been made.

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