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RESEARCH ARTICLE
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IDENTIFYING AND MANAGING OBSTETRIC EMERGENCIES IN NON-OBSTETRIC SETUP

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ABSTRACT

Introduction: Acute abdominal pain in pregnancy poses a significant diagnostic challenge. The differential diagnosis is wide, clinical assessment is difficult, and the use of conventional imaging methods is restricted due to risks to the fetus. This can lead to delay in diagnosis, which increases the risk of maternal and fetal harm. To curb the morbidity and mortality associated with delayed/missed diagnosis, knowledge of the frequency, aetiologies, and clinical presentation of acute abdomen in pregnancy is needed to aid us to make prompt and accurate diagnoses.

Objectives: To assess the aetiologies and review clinical profile of acute abdomen in pregnancy.
Methods: It was an observational study done over a period of 1year which included all the pregnant women who presented with acute abdomen.

Results: A total of 118 pregnant women presented with acute abdomen during our study. The mean age of the study participants was 28 years. Concerning gravidity, 27.11% of patients were primigravida (first pregnancy). Most patients (66.94%) were multi-gravida (2 - 4 pregnancies) and 0.05% were grand multi-gravida (5 or more pregnancies). Most cases (65.25%) of acute abdomen in pregnancy were observed during the first trimester of pregnancy. 28.81% and 5.94% occurred in the 2nd and 3rd.Gynaeco-Obstetrics aetiologies of acute abdomen in pregnancy comprise a vast majority (83.05%) of causes. Acute appendicitis (3.38%) is the commonest non-obstetric surgical aetiology of acute abdomen in pregnancy. The most consistent symptoms and signs were abdominal pain (100%) and abdominal tenderness (96.61%) respectively. 76.27% had per vaginal bleeding, 25% had nausea/vomiting, 23% had fever, and 18% presented with anorexia.16% of patients had signs of peritonism.

Conclusion: Diagnosis and treatment of acute abdomen in pregnancy should be individualized. Good clinical acumen is essential for ordering early diagnostic test in acute abdomen in pregnancy. Appropriate intervention should be undertaken at the earliest to reduce the maternal and fetal complications.

KEY WORDS: Acute Abdomen, Pregnancy, Clinical presentation, Obstetrical, Non-Obstetrical

Introduction:

Pregnancy is special. Let's make it safe (WHO)

Acute abdomen in pregnancy remains one of the most challenging diagnostics and therapeutic dilemmas today. An acute abdomen in pregnancy can be caused by pregnancy itself, be predisposed to by pregnancy or be the result of a purely incidental cause.1 Pregnancy increases the chances of developing acute abdomen. 2 The diagnostic approach of acute abdomen during pregnancy can be tricky owing to the altered clinical presentations brought about by the anatomical and physiological changes of gestation along with the reluctance to use certain radiological investigations for fear of harming the fetus. Leading problems in the diagnosis of acute abdomen during pregnancy are: expanding uterus, which displaces other intra-abdominal organs and thus makes physical examination very difficult, high prevalence of nausea, vomiting, and abdominal pain in the normal obstetric population and general reluctance to operate unnecessarily on a gravid patient3. Delay in diagnosis and treatment can lead to adverse outcomes for both the mother and fetus. Clearly, the case of a pregnant patient with acute abdomen is a clinical scenario that overlaps specialties. There should be no hesitation to involve a surgeon, an obstetrician/gynaecologist, and a special needed. Surgical-fetal medicine when this challenging situation arises.

Patients who develop symptoms or signs of serious pregnancy related complications may seek emergency care even in non obstetric settings.

The basic principles of dealing with obstetric emergencies are the same as for any emergency { AIRWAY / BREATHING / CIRCULATION } , but remember in obstetrics we are dealing with two lives – the mother and the baby ; and the fetus is very vulnerable to maternal hypoxia .

PRESENTATION OF ACUTE ABDOMEN

OBSTETRICAL CAUSES:

Abortion
Ectopic pregnancy (ruptured/ unruptured)
Conon-obstetricyst ruptucauses. Ectopicour
Chorionamnionitis
Abruption placentae
Preeclampsia / Eclampsia

GYNAECOLOGICAL CAUSES:

Adnexal torsion
Uterine rupture
Degenerating fibroid
Ovarian cyst rupture
Tubo-ovarian complex

NON-GYNAECOLOGICAL CAUSES:

LIVER: Hepatitis/ Hematoma/ hepatic rupture
GALL BLADDER: Biliary colic / Acute cholecystitis / cholangitis
PANCREAS: Pancreatitis
STOMACH: Peptic ulcer/ Gastritis / GERD
SPLEEN: of 2nic rupture / spleen artery aneurysm rupture
INTESTINES: Bowel obstruction / Perforated duodenal ulcer / Herniation/ Diverticulitis
RENAL: Hydronephrosis / Pyelonephritis / Cystits / UTI / Colic
APPENDIX: Appendicitis

Objective: To assess the etiologies and review clinical profile of acute abdomen in pregnancy

Methods:

It was an observational study done over a period of 1 year in the department of OBG SKIMS Soura.

A total of 118 pregnant women who presented with acute abdomen during pregnancstudy included. A detailed history and a thorough clinical examination were performed.
The necessary investigations apart from the routine antenatal tests were carried out . Ultrasonography was performed in all. MRI was done when feasible or when diagnosis was unclear. Case management was2001; 69:422ised, and surgical and medical team involvement was made whenever needed. Surgical intervention was taken if indicated.

Results : A total of 118 women presenting with acute pain abdomen during pregnancy were studied. Most of the women (52.54%) were of the age group of 25 to 30 years. The mean age was 28 years.

AGE GROUP DISTRIBUTION		
AGE GROUP	FREQUENCY	PERCENTAGE
< 25 YEARS	9	7.62%
25-30 YEARS	62	52.54%
>31 YEARS	47	39.40%

Concerning gravidity 27.11% of patients were primigravida (first pregnancy). Most patients (66.94%) were multi-gravida (2 - 4 pregnancies) and 0.05% were grand multi-gravida (5 or more pregnancies).

GRAVIDITY DISTRIBUTION		
GRAVIDITY	FREQUENCY	PERCENTAGE
PRIMIGRAVIDA	32	27.11%
MULTIGRAVIDA	79	66.94%
GRAND MULTIGRAVIDA	7	0.05%

Most cases (65.25%) of acute abdomen in pregnancy were observed during the first trimester of pregnancy. 28.81% and 5.94% occurred in the 2nd and 3rd trimesters.

TRIMESTER WISE PRESENTATION		
TRIMESTER	FREQUENCY	PERCENTAGE
IST	77	65.25%
2ND	34	28.81%
3RD	7	5.94%

Gynaeco-Obstetrics aetiologies of acute abdomen in pregnancy comprise a vast majority (83.05%) of causes. Ectopic pregnancy (39.83%) was the most common obstetric cause of acute abdomen in pregnancy. Acute appendicitis (3.38%) is the commonest non-obstetric surgical aetiology of acute abdomen in pregnancy.

Frequency Distribution Of Aetiology		
Aetiology	Frequency	Percentage
Obstetric		
Ectopic Pregnancy	47	39.83
Miscarriage	39	33.05
Abruptio Placentae	3	2.54
Uterine Rupture	1	0.84
Non Obstetric		
Urinary Tract Infection	10	8.47
Symptomatic Myoma	3	2.54
Pelvic Inflammatory disease	2	1.69
Appendicitis	4	3.38
Gastroenteritis	2	1.69
Ovarian Cyst	3	2.54
Cholecytitis	3	2.54
Intestinal Obstruction	1	0.84
Total	**118**	**100**

The most consistent symptoms and signs were abdominal pain (100%) and abdominal tenderness (96.61%) respectively. 76.27% had per vaginal bleeding, 25% had nausea/vomiting, 23% had fever, and 18% presented with anorexia.16% of patients had signs of peritonism.

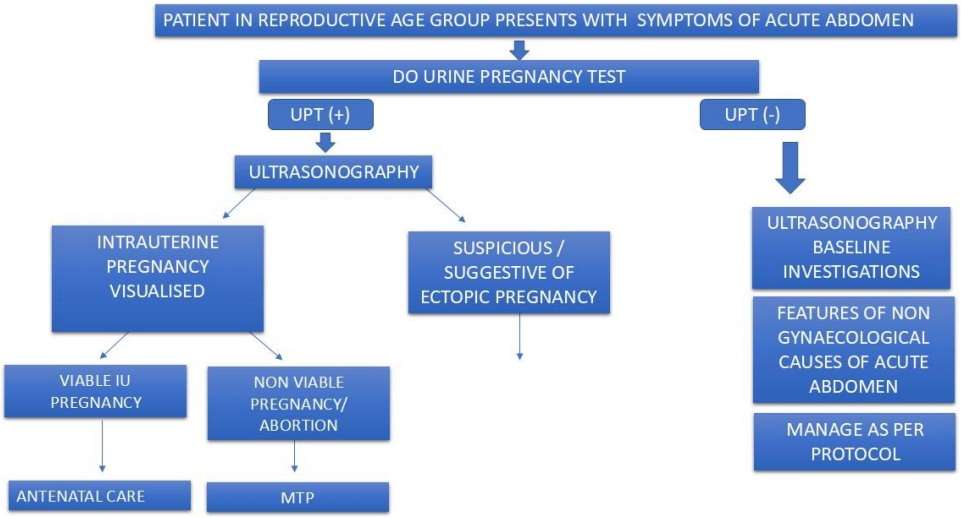
Clinical Presentation		
Signs & Symptoms	Frequency	Percentage
Abdominal Pain	118	100
Nausea/Vomitting	25	21.18
Fever	23	19.49
Anorexia	18	15.25
PerVaginal Bleeding	90	76.27
Abdominal Tenderness	114	96.61
Peritonism(Rebound,Gaurding/Rigidity)	16	13.55

Discussion:

The incidence of acute abdomen during pregnancy is 1 in 500-635 pregnancies.4 The frequency of non-obstetrical acute abdomen is 0.39%, mostly multifactorial. 0.2% to 1.0% of all pregnant women require non-obstetrical general surgery.5

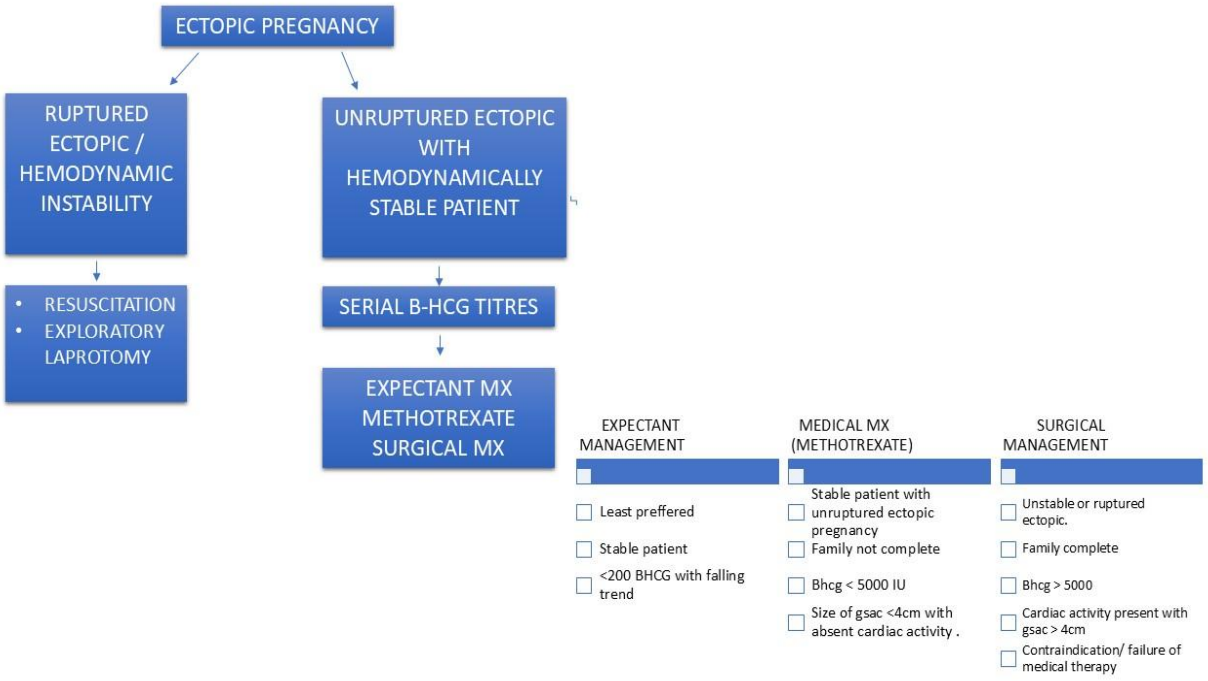
Any cause for acute abdomen can occur coincident with pregnancy. Some clinical conditions are more likely to occur in pregnancy; others are specific to pregnancy. Thus, a wide range of possible differential diagnoses should be considered.In our study, we aimed to give an overview of the causes of acute abdomen during pregnancy with special attention to the clinical presentation. It was an observational study done over a period of 2 years which included all the pregnant women who presented with acute abdomen. The study population included one hundred eighteen pregnant women who presented with acute abdomen. The age distribution (years) showed majority of women (50%) in the range of 25-30 years. The cases were analysed based on the trimester and clinical presentation . Trimester-wise distribution showed 65.25 % women in first trimester, 28.81% women in second trimester and 5.94% women in third trimester. Ectopic pregnancy was the most common obstetric cause of acute abdomen in our study. This observation is consistent with the results of a number of studies.6,7,8 Acute appendicitis was the most common non-obstetric surgical aetiology of acute abdomen in our study. It agrees with the global picture where acute appendicitis in pregnancy is the most common cause of emergency non-obstetric surgical abdomen affecting 1 in 1500 pregnancies .9,10Abdominal pain and abdominal tenderness were the most consistent symptom and signs respectively. This finding was in line with that of Woodhead et al. 2019 11 Jan et al.12 who reported that abdominal pain and tenderness were found in 100% of participants.

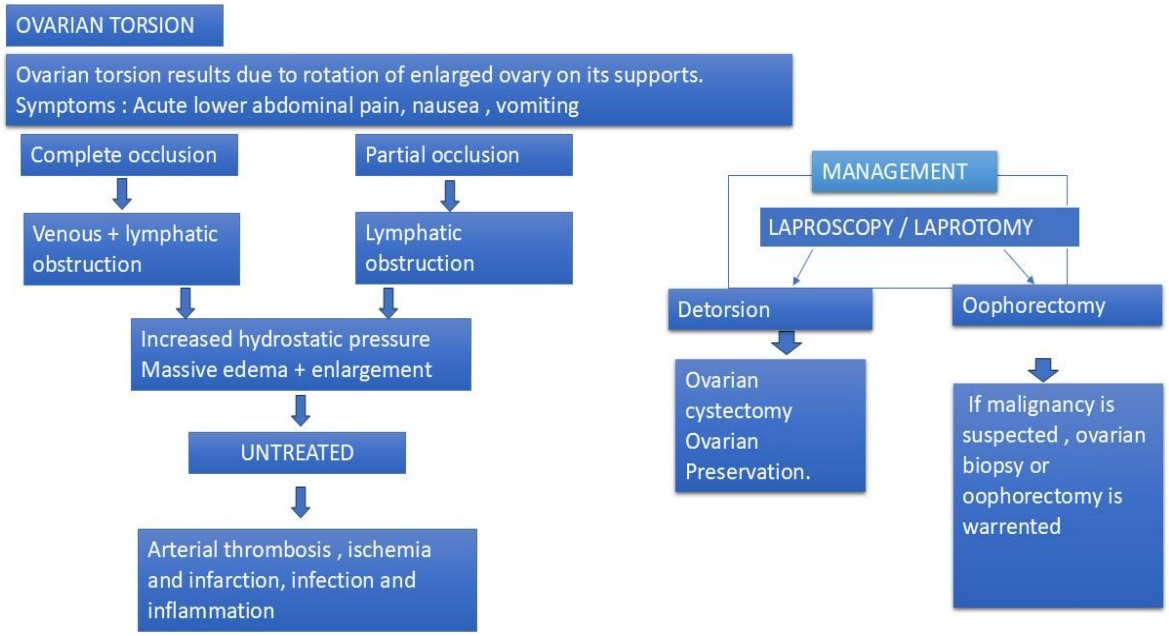
ALGORITHM BASED APPROACH

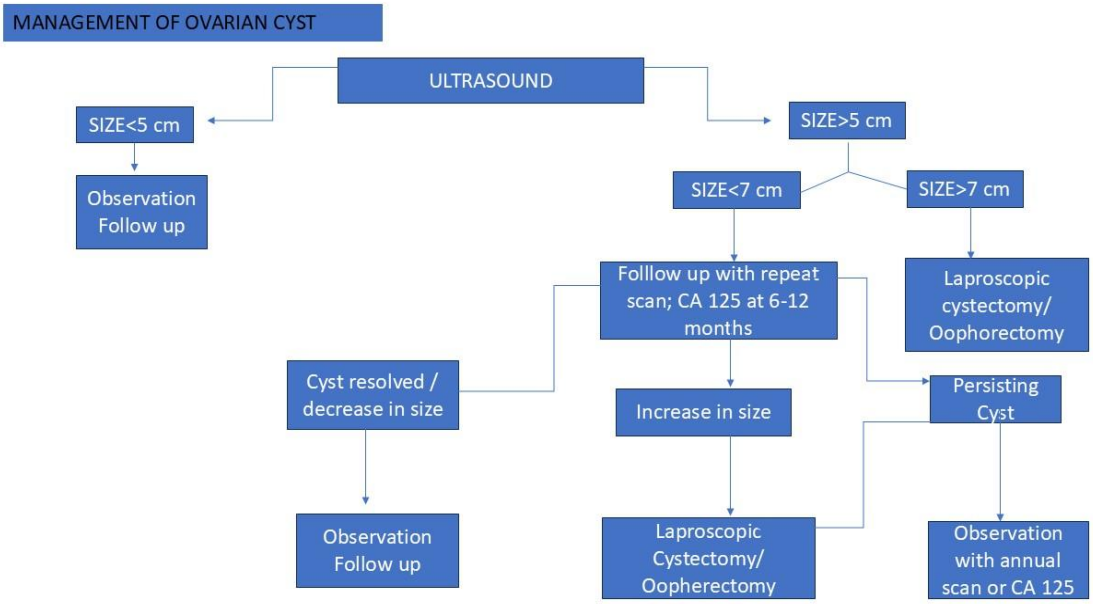


ECTOPIC PREGNANCY

SYMPTOMS CAN BE AMENORRHEA/ ABDOMINAL PAIN / BLEEDING P/V.
OR THE PATIENT MAY NOT BE AWARE AND THE SYMPTOMS MAY BE ABSENT UNTIL RUPTURE OCCURS, SOMETIMES WITH CATASTROPHIC RESULTS.
PEARL: SUSPECT ECTOPIC PREGNANCY IN ANY FEMALE PATIENT OF REPRODUCTIVE AGE WITH PELVIC PAIN, VAGINAL BLEEDING OR UNEXPLAINED SYNCOPE OR HEMORRHAGIC SHOCK, REGARDLESS OF MENSTRUAL /CONTRACEPTIVE/SEXUAL HISTORY AND EXAMINATION FINDINGS.

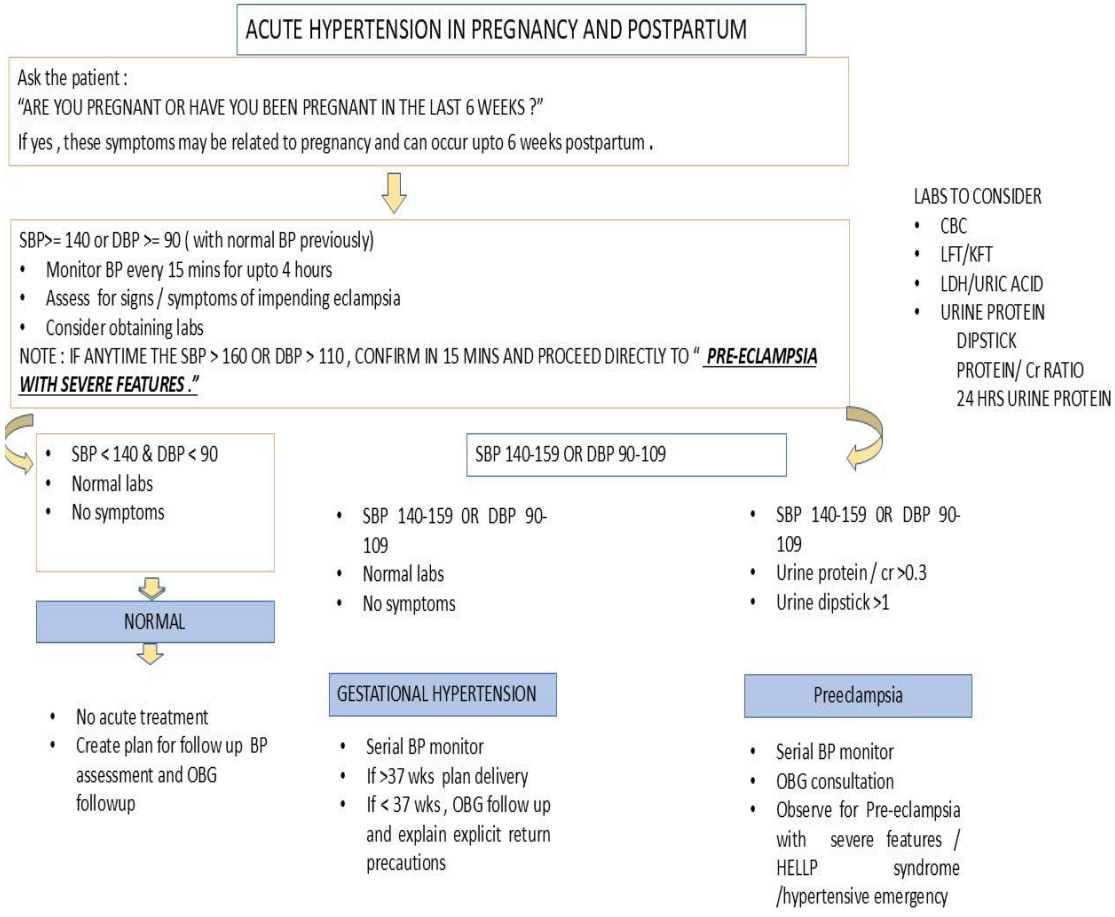






PREGNANCY INDUCED HYPERTENSION

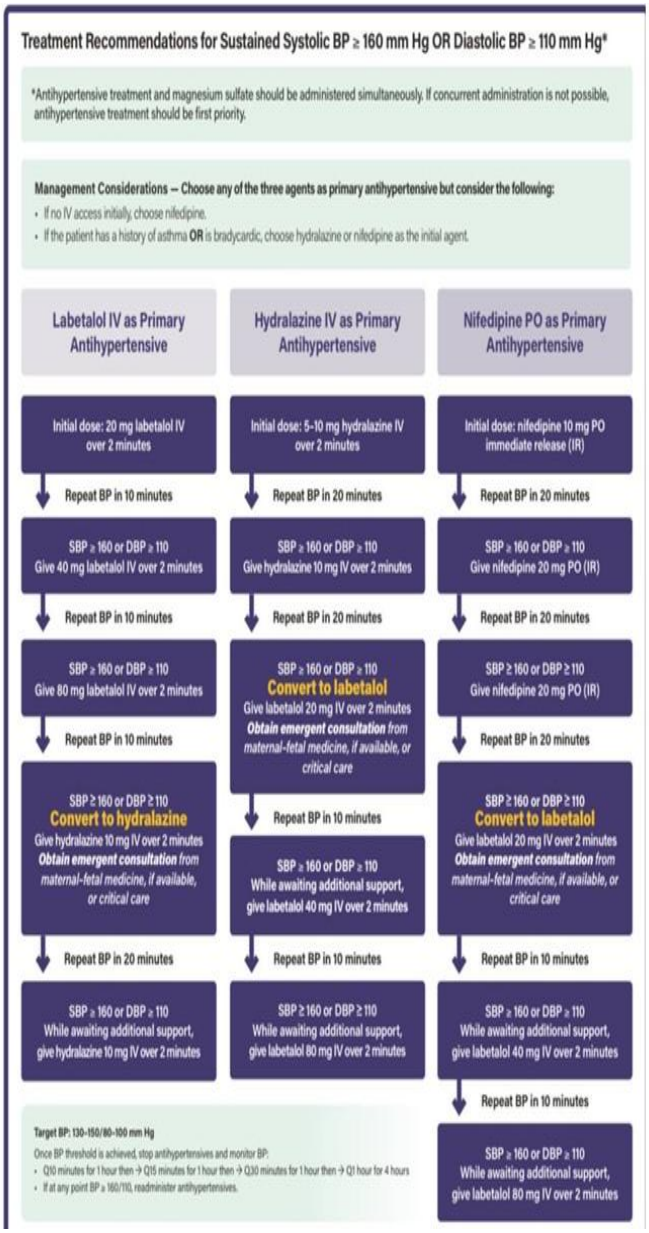
ACUTE MATERNAL HYPERTENSION AND ECLAMPSIA ALGORITHMS 2024 HAVE BEEN DEVELOPED BY ACOG (AMERICAN COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS) WITH THE AIM TO IMPROVE THE IDENTIFICATION OF PATIENTS AND READINESS OF EMERGENCY PRACTITIONERS

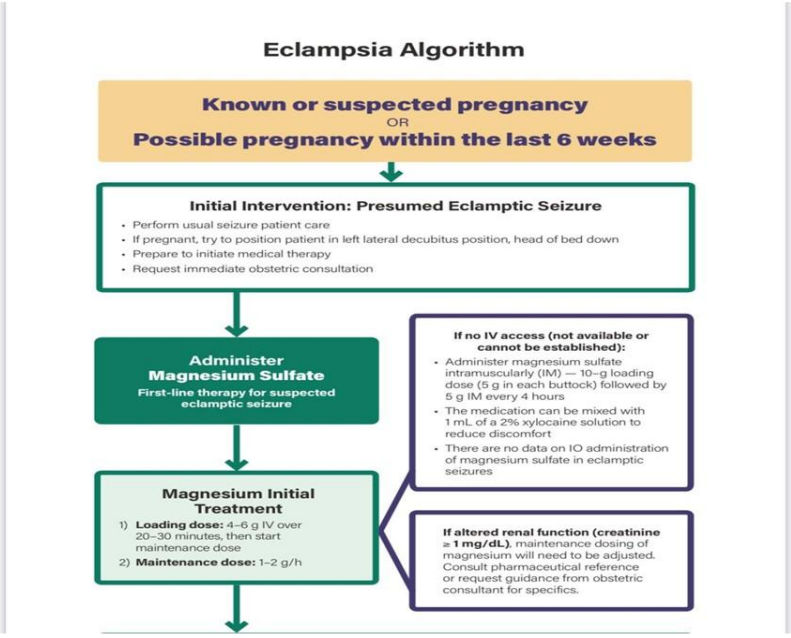


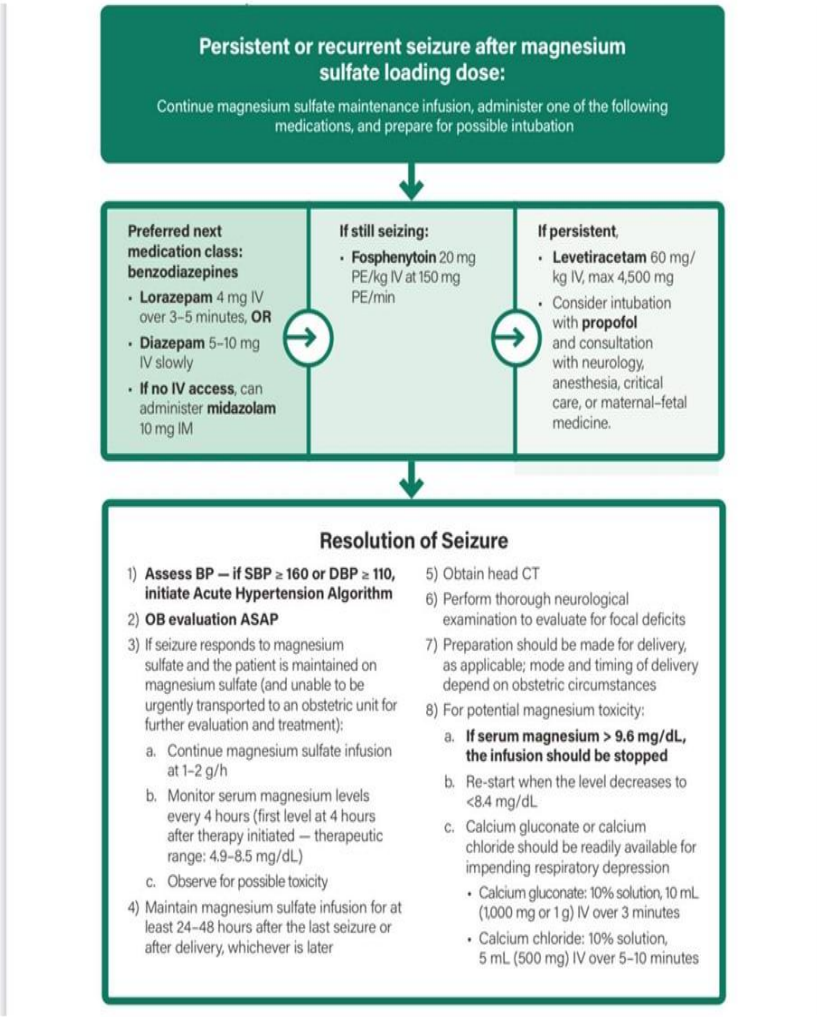
- SBP > 160 OR DBP > 110
  OR
- SBP 140-159 OR DBP 90-109 WITH ANY LAB ABNORMALITIES / SYMPTOMS

Preeclampsia with severe features

- Initiate antihypertensives if persistent SBP>160 OR DBP > 110
- Serial bp (every 15 mins)
- Initiate MGSO4 therapy
- Observe forHELLP syndrome
- OBG evaluation or transfer to a facility with OBG capability







Conclusion:

Diagnosis and treatment of acute abdomen in pregnancy depends on the specific situations. Individualized approach is the best while evaluating a pregnant woman. Diagnosis should be confirmed with appropriate investigations to prevent delay in the management. Higher order imaging like MRI can be used as MRI is considered to be safe in pregnancy. Early intervention is recommended to reduce the maternal fetal complications.

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