



## ANAESTHETIC MANAGEMENT OF A PREGNANT PATIENT FOR EMERGENCY OPEN APPENDECTOMY.

### Anaesthesiology

**Dr Ruby Guleria\*** MD Anaesthesia, Dr RPGMC Tanda HP. \*Corresponding Author

**Dr Ritu Sharma** MD Anaesthesia, Dr RPGMC Tanda HP.

### ABSTRACT

Non obstetric surgery during pregnancy poses greater challenges to anaesthesiologists. The estimated incidence of pregnant women requiring non obstetric surgery is around 1-2%. Among these, appendectomy is the most common surgery during pregnancy. The choice of anaesthetic technique and selection of appropriate drugs are such to preserve maternal safety, maintain pregnant state and achieve the best possible fetal outcome. We discuss a case of a 26 year old pregnant patient at 18 weeks 3 days gestation presenting to the emergency department with acute appendicitis managed by emergency open appendectomy under regional anaesthesia.

### KEYWORDS

Pregnancy, emergency appendectomy, regional anaesthesia.

### INTRODUCTION

Acute appendicitis in pregnancy is one of the most frequent non gynaecological and non obstetric pathology requiring emergency surgery.<sup>1</sup> The incidence rate has been reported to be 1:1000 to 1:1500.<sup>2</sup> Some of the features seen in acute appendicitis are non specific and may be seen in pregnancy such as anorexia, vomiting, leucocytosis, tachycardia, right lower quadrant pain and abdominal tenderness. Displacement of appendix by gravid uterus decreases the ability to localise tenderness making it even more difficult to form a diagnosis, hence increasing the risk of perforation, further increasing maternal morbidity and fetal loss.

The second trimester is chosen for semi-elective surgery which cannot be postponed, however, urgent and emergency surgery should not be delayed due to associated risk to the mother and fetus.<sup>3</sup>

The principle anaesthetic goals include maternal safety, maintenance of pregnant state and a favourable fetal outcome. The perioperative approach includes multidisciplinary team clients in one" scenario.

### CASE REPORT

A 26 year female patient arrived in the casualty with c/o pain right abdomen for 2 days with 2 episodes of vomiting and undocumented feverish feeling for 1 day. There was no other significant medical or surgical history. She had amenorrhea for 5 months and it was found that she was G<sub>2</sub>P<sub>0+1</sub> at period of gestation 18 weeks 3 days with h/o previous spontaneous abortion 1 year back at 3 months gestation. On examination, she was afebrile, heart rate 90 beats per minute, blood pressure 110/74mmHg, sp<sub>o</sub><sub>2</sub> 98% on room air. Per abdominal examination revealed tenderness on palpation at the right inguinal region localized to Mcburney's point. Ultrasound evaluation revealed normal fetal growth parameters as per gestation and high radiological suspicion of acute appendicitis and the patient was posted for emergency open appendectomy. Blood investigations were sent and reported normal. Airway examination revealed Mallampati class 3 with adequate mouth opening, normal range of motion of head and neck and a complete dentition. No other abnormality was found on physical examination.

### Anaesthetic Management:

Preoperative nil by mouth status was confirmed. Anti aspiration and antibiotic prophylaxis were given as per hospital protocol. The surgery was planned under spinal anaesthesia. Patient was taken in OT and placed in a 15° left lateral tilt. All standard monitoring i.e. sp<sub>o</sub><sub>2</sub>, ECG, NIBP were attached. 18 G IV cannula was secured in left forearm and fluid started. O<sub>2</sub> inhalation was started @ 3l/min via nasal prongs. Foley's catheter was in situ. Vitals and urine output were noted. Fetal heart rate was checked before and after the positioning of the patient for spinal anaesthesia in left lateral position. Under all aseptic precautions, in the left lateral position, median approach, subarachnoid block was administered in L<sub>3</sub>-L<sub>4</sub> interspinous space with 2.6ml 0.5% heavy Bupivacaine after confirming CSF flow. The surgery was allowed after confirming adequate sensory levels. Intraoperative period was uneventful with stable vitals and adequate hydration to maintain a mean arterial pressure of 65 mmHg. Total duration of surgery was 45 minutes. The fetal heart rate was confirmed

after surgery. Postoperative period was uneventful and recovery complete. Patient was discharged after 1 day.

### DISCUSSION

The clinical approach to pregnant patients with suspicion of acute appendicitis is variable. The incidence and morbidity is similar to that of non pregnant patients. The most commonly encountered problem for pregnant patients is the diagnosis due to non specific symptoms which may mask the clinical picture hence reducing the sensitivity of clinical examination.<sup>5</sup> Laparoscopic appendectomy may be preferred due to smaller incision, reduced pain, rapid recovery, hence, reduced morbidity to the mother and potential decreased incidence of preterm due to less manipulation of the uterus.<sup>6</sup> However, surgeon expertise remains a challenge. Choice of anaesthetic technique and drugs depend on type, duration and approach of surgery. Regional anaesthesia reduces the exposure of fetus to potential teratogens, avoids risk of failed intubation & aspiration and provides excellent post operative analgesia.<sup>7</sup> During anaesthesia and surgery fetal well being is best ensured by careful monitoring and maintenance of maternal hemodynamic parameters and oxygenation.

### CONCLUSION

Dealing a pregnant patient for non obstetric surgery is challenging and anaesthetic management should be planned to preserve pregnancy and ensure the safety of mother as well as the fetus.

### REFERENCES

1. Coleman MT, Triano VA, Rund DA. Nonobstetric emergencies in pregnancy: Trauma and surgical conditions. *Am J Obstet Gynaecol.* 1997;177:497-502.
2. Crowhurst JA. Anaesthesia for non-obstetric surgery during pregnancy. *Acta Anaesthesiol Belg.* 2002;54:218-22.
3. Mazze RI, Kallen B. Reproductive outcome after anaesthesia and operation during pregnancy: A registry study of 5405 cases. *Am J Obstet Gynecol.* 1989;161:1178-85.
4. Buser KB. Laparoscopic surgery in the pregnant patient: results and recommendations. *JSL.* 2009;13:32-35.
5. Alkis I, Kurdoglu M, Kurdoglu Z. Nonobstetric surgical intervention in pregnancy. *East J Med.* 2010;15:1-6.
6. Freeland M, King E, Safcsak K, Durham R. Diagnosis of appendicitis in pregnancy. *Am J Surg.* 2009;198:753-758.
7. Hoshino T, Ihara Y, Suzuki T. Appendicitis during pregnancy. *Int J Gynaecol Obstet.* 2000;69:271-273.