

Anaesthetic practice appendectomy at second trimester of pregnancy nursing essay



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This is a reflective essay based on my personal experience as a student anaesthetic practitioner which happened during in one of my clinical placements in an acute hospital. This is a case of a 42 year old at her 24 weeks gestational pregnancy who underwent an emergency appendicectomy under a general anaesthesia with difficult intubation. I will refer to patient as Mrs. G in order to keep her confidentiality (NMC Code of Conduct 2008). The Gibb's reflective cycle will be the framework of my reflection (Jasper 2003) which is shown in Appendix A.

Mrs. G. had been admitted due to nausea, vomiting, fever, right abdominal pain, and mild elevation of her white blood cell count which are the presenting symptoms of appendicitis. She underwent ultrasonography of abdomen and confirmed an acute appendicitis, thus, an urgent booking for an open appendicectomy was done. The patient proceeded to the operating theatre with little delay to minimise the sequence to perforation. Such occurrences are uncommon, however, seeing that most cases of appendiceal perforation occur earlier to surgical assessment as described by MacMahon (1991). The theatre team gathered to do a preoperative briefing. The Operating Department Practitioner (ODP), anaesthetist, surgeon, obstetrician, neonatologist, midwife, circulating, scrub nurse and myself were present (WHO 2008). After doing all the routine checks of anaesthetic equipments and drugs as advised by the AAGBI 2004, I went to check the patient (AfPP 2007), the informed consent (DOH 2009) then accompanied her into the anaesthetic room. Markedly, Mrs. G looked dehydrated, due to fever and reduced oral intake, hence, intravenous fluids was initiated, and pulse, blood pressure, ECG, oxygen saturation and urine output was

monitored closely. A Foley catheter was inserted in theatres to ensure adequate urine output. Electrolyte deficiency should be corrected before the induction of general anesthesia (Shields & Werder 2002).

As a health care professional and a student, I felt pity on Mrs. G because of the severe pain she was having, but what I could only give is to support her. Mrs. G and her husband were in the holding bay and while waiting there to be brought inside the anaesthetic room, apparently, they looked very upset. I stayed with them. I remembered that I should always be present especially when the surgeon, anaesthetist and the whole medical staff discuss the diagnosis and prognosis with them. This action will ensure that someone who will have also heard the discussion dialogue will support the patient, family or carer. We should be aware of the need for privacy when giving information and must endeavour, where the physical environment allows using a “closed door” environment to ensure absolute confidentiality. We also provide appropriate support to relatives by accompanying them and the patient into the anaesthetic room and to keep them regularly updated and should be given the opportunity to speak to the medical staff especially for relatives of critically ill patient and unconscious patients. We must listen to the patients and carers. Their input should be actively sought and not rebuffed. According to Wicker & O’Neil 2006, we are expected to communicate and give information in a caring, sensitive, friendly and considerate manner and should endeavour to create an atmosphere of confidence and trust when communicating with patients and their families.

Careful attention to the evaluation of the airway, antacid pre-treatment and all required preparation for a potentially difficult airway was done for Mrs. G
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in the preoperative period. It is recommended that from 16 weeks gestation patients undergoing general anaesthesia should be given prophylaxis against aspiration pneumonitis. This usually includes a non-particulate antacid such as sodium citrate 30ml and an H₂ receptor antagonist e. g. Ranitidine 50mg intravenously (Yentis et al 2007). Whilst positioning Mrs. G on the operating table, a left lateral inclination of between 15 - 30 degrees was made. Otherwise, a wedge under the right buttock may be used to minimise aortocaval compression as stated by Aitkenhead & Smith (1990). Pre oxygenation was given as it is crucial and should be with a firm fitting mask for at least 3 minutes. As said by Pinnock et al (2003), General anaesthesia involves administration of drugs with possible effects on the foetus. Drugs with good safety records during pregnancy were used like Thiopentone, an induction agent, Suxamethonium which is a fast-acting muscle relaxant, Phenylephrine, a vasopressor to increase blood pressure and Metaraminol which is a sympathomimetic used to prevent and treat hypotension (Ponte & Green 1994). Drugs that might increase uterine tone like Ketamine and beta-blockers should be avoided (BNF 2010). Obstetricians would request perioperatively, prophylactic tocolytic drugs such as Magnesium Sulfate, Terbutaline and Nifedipine, in order to prevent premature labour. Beta-adrenergic agonists such as Terbutaline are commonly used although their efficacy is vague and may affect maternal tachycardia and pulmonary oedema as stated by Campbell & Spence (1997). Recent evidence suggests that calcium-channel blockers like Nifedipine may be effective with a better safety report in line with Simpson & Popat 2002. In general, the fewer drugs used overall the better. Drugs such as non-steroidal anti-inflammatory drugs or NSAID's given near to labour may cross the

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placenta thereby averting the ductus arteriosus to close in relation to Moules & Ramsay (2008). I explained to Mrs. G that a rapid sequence induction will be done for her safety and this is by applying a gradually increasing pressure on her neck specifically on the cricoids area. This is also known as Sellick manoeuvre. Intubation might be difficult and so adjuncts for a difficult intubation have been prepared. The operating department practitioner stood behind me whilst coaching me. Suction apparatus was available close at hand, laryngoscope and endotracheal tube was prepared, lubricated and a syringe was attached to the cuff. I did a careful cricoid pressure whilst handling the bougie with the endotracheal tube, but she could hardly see the airway hence, the anaesthetist asked for a guedel oral airway and ventilated her. Later she asked for an Airtraq, which is a disposable laryngoscope with a built-in camera for easy view of the airway. Again, it was difficult. Finally, a fibreoptic scope was used until a successful intubation was achieved. Once the airway was secured, ventilation intended to keep the PCO₂ in the standard range for her pregnancy. The MAC or minimum alveolar concentration of volatile anaesthetic was reduced. The foetal heart rate was monitored preoperatively and postoperatively but intraoperatively, it has been difficult as the surgery was abdominal.

Along with Allman & Wilson (2006), the main concerns of the anaesthetist caring for Mrs. G are the physical response relating to the cardiovascular, respiratory, central nervous and gastrointestinal systems. Stoelting & Miller 1994 pointed out that physiological and anatomical changes arise in the respiratory system all throughout pregnancy is due to hormonal and mechanical factors. In accordance with Drain (2003), dyspnoea is always

common in pregnancy and oedema of the mucosal airway makes the view at laryngoscopy poor. According to Avidan et al (2003), cardiac output is increased roughly by 40%, and as early as 12-13 weeks, the gravid uterus constrict the lower vena cava when the woman rests flat on her back. Obstruction of the aorta may occur and result in diminished placental blood flow. This is very important when positioning a pregnant patient on the operating table as it can lead to profound hypotension. In severe hypotension and foetal bradycardia patient is turned to the left lateral position Yentis et al (2007).

Increased in gastric regurgitation and aspiration might happen during induction of general anaesthesia as stated by Davey & Ince 2000 therefore, a rapid sequence induction is obligatory when inducing general anaesthesia. Primarily, blood and oxygen flow must be given to both mother and foetus in order for surgery to be safe Gwinnut (2004). Accurate monitoring, recording and interpretation of any baseline measurement and any subsequent physiological measurement that fall outside of normal limits should be observed. Any fall in blood pressure, oxygen saturation, pulse, respiration, and foetal heart rate should cause alarm for the team. Doctors and anaesthetists must be cautious when operating on pregnant women because of the possibility of a preterm labour which should be observed postoperatively. The surgery has finished and went well. Mrs G was extubated awake and on her side to cut the risk of aspiration of gastric contents. She was transferred immediately to the Recovery and her husband was informed.

I think having both myself and Mrs. G and her family a greater understanding of their condition, treatment, care and the risks of treatment will help alleviate their fears and anxieties. The patient will be satisfied as she understands what is being done to her, therefore, there will be improvement in the overall outcome, speed of recovery, health, and patient experience. The whole team has done their part well and everything for the safety of both the mother and foetus.

Pregnant women assumed of having appendicitis are often misdiagnosed and undergo unnecessary appendicectomies which result in early delivery or loss of the foetus. After careful reflection, I strongly believe that there is a need to require more precise diagnosis to avoid needless operations and unfavorable fetal loss. One straightforward solution that I can say is the use of advanced imaging tools, such as ultrasound and magnetic resonance imaging in order to increase diagnostic accuracy. Mrs. G was lucky not because of having a genuine inflamed appendix which has not ruptured so far but the diagnosis was accurately and immediately made through an ultrasound. Preterm labour was also prevented because of the necessary precautions that the whole team has contributed.

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