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CLINICAL CASE

Anaesthetic management of patients in the third trimester of pregnancy undergoing urgent laparoscopic surgery. Experience in a general hospital☆

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KEYWORDS
Anaesthesia;
Third trimester of pregnancy;
Hypotension;
Urgent laparoscopic surgery

Abstract
Background: Laparoscopic surgery is well accepted as a safe technique when performed on a third trimester pregnant woman.
Objective: The aim is to describe the anaesthetic management of a group of patients undergoing this type of surgery.
Material and methods: An analysis was made of records of 6 patients in their third trimester of pregnancy and who underwent urgent laparoscopic surgery from 2011 to 2013.
Clinical Cases: The study included 6 patients, with a diagnosis of acute cholecystitis in 4 of them. The other 2 patients had acute appendicitis, both of who presented threatened preterm labour.
Conclusion: The most frequent indications for laparoscopic surgery during the last trimester of birth were found to be acute cholecystitis and acute appendicitis. Acute appendicitis is related to an elevated risk of presenting threatened preterm labour.

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PALABRAS CLAVE
Anestesia;
Tercer trimestre del embarazo;
Hipotensión;
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Cirugía laparoscópica de urgencia en el tercer trimestre de gestación y su manejo anestésico. Experiencia de un hospital general

Resumen
Antecedentes: Anteriormente la cirugía laparoscópica se contraindicaba en el tercer trimestre de gestación, aunque recientemente ha ganado aceptación como la técnica más segura para el binomio madre-hijo.
Objetivo: Describir el manejo anestésico y la evolución clínica de las pacientes que cursan el tercer trimestre de gestación y requirieron cirugía laparoscópica de urgencia en el Hospital General Dr. Manuel Gea González.
Material y métodos: Estudio transversal, descriptivo y observacional. Se seleccionaron de la base de datos los expedientes clínicos de las pacientes embarazadas en el tercer trimestre que ameritaron cirugía laparoscópica de urgencia durante el período de enero de 2011 a abril de 2013 en el Hospital General Dr. Manuel Gea González.
Casos clínicos: Se incluyeron 6 pacientes. Cuatro se intervinieron por colecistitis aguda y 2 por apendicitis aguda. Dos recibieron anestesia total intravenosa y 4 anestesia general balanceada. Todas recibieron tocolisis profiláctica y el feto fue vigilado en el perioperatorio por un ginecoobstetra. Las 2 pacientes con apendicitis presentaron amenaza de parto pretérmino.
Conclusión: En el tercer trimestre del embarazo puede requerirse cirugía urgente por diversas dolencias; en nuestro estudio se presentó en el 72% por colecistitis y en el 28% por apendicitis. La sepsis abdominal es factor de riesgo para amenaza de parto pretérmino.

Background

The majority of anaesthetists are familiar with patient management during birth and in caesarean section operations but when the pregnant patient undergoes non-obstetric surgery it is a different matter, since the actual anaesthetic implications of pregnancy are to be managed in addition to those of the laparoscopic surgery[1].

It has been calculated that in the United States 2% of pregnant women undergo some type of emergency non-obstetric surgery,[2] per year and this becomes a challenge for both the anaesthetist and the surgeon. The main aspects of consideration are: the anaesthetic risk of the mother relating to her pregnancy, the drugs to be used and the maintenance of correct utero-placental blood flow.[3–5] The most frequent surgical interventions in these patients are: appendectomies, cholecystectomies and adnexal surgery.[6–8] It is believed that 4.5% of pregnancies continue full term with non symptomatic cholecystitis whilst only 0.05% present with acute cholecystitis. Of the latter, 40% require surgical intervention.[9,10] The specific risks for the mother and for the foetus when undergoing non-obstetric surgery are: loss of foetus, foetal asphyxia, pre-term labour, membrane rupture, associated risks of unsuccessful intubation and thromboembolic phenomena.[11,12]

Up until recently, the lack of experience of this type of intervention in the third trimester of pregnancy resulted in it being a contraindication. At present, despite the increase of this procedure, there is still a need for further guidelines or directives for correct management of anaesthesia.

The aim of this study was to describe the experience we had with anaesthesia management in emergency laparoscopic surgery in third trimester pregnant women.

Material and methods

A transversal, descriptive, observational study was conducted which had been previously approved by the Research and Ethics of Research Committee of the Hospital General Dr. Manuel Gea González. The data base was reviewed for the surgical interventions carried out in the hospital, from 1st January 2011 to 30th April 2013.

All cases of emergency laparoscopic surgery for third trimester pregnant patients which took place between 1st January 2013 and 30th April 2013 were included. Cases without a complete medical record were excluded.

Data was collated relating to medical information, post-operative diagnosis, anaesthetic management, haemodynamic behaviour during surgery and the evolution of the patient and her baby.

The following data was recorded: patients' ages, number of pregnancies, weeks of gestation when undergoing surgery, anaesthetic technique used, blood pressure during surgery, foetal heartbeat and uterine activity before and after surgery, transportation to the post-anaesthetic care unit or the intensive therapy unit, reason for pregnancy termination, method (delivery or caesarean section) and weeks of pregnancy at delivery.

Results

During the period of study 6 laparoscopic surgical procedures were carried out. These are described below.

Case 1

Patient aged 23, with multiple pregnancies, 3 previous deliveries and a current pregnancy of 30 weeks gestation period.