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Case report

Caesarean section in a patient with chronic portal vein thrombosis and thrombocytopenia: Case report☆

Teresa López Correa[a,*], *José A. Sastre Rincón*[b]

[a] *Anaesthesia Department, Hospital Nuestra Señora de Sonsoles, Ávila, Spain*
[b] *Anaesthesia Department, Hospital Universitario de Salamanca, Salamanca, Spain*

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ABSTRACT

We report the case of a pregnant woman at term with primary anti-phospholipid syndrome, portal vein thrombosis, massive splenomegaly, oesophageal varices and thrombocytopenia. The patient underwent an elective caesarean section under general anaesthesia to minimise the risk of spleen and variceal rupture, with a favourable outcome for both the mother and the newborn.

Chronic portal vein thrombosis is a rare condition, caused by various reasons, mainly thrombotic diathesis. It leads to increased portal pressure, with development of collateral circulation, splenomegaly and thrombocytopenia. Pregnancy in these conditions is considered high risk, but is not contraindicated if the underlying disorder is stabilised. The management of these patients should be multidisciplinary, under close monitoring; diagnosis and treatment of possible oesophageal varices is essential. The decision about mode of delivery and anaesthetic management must be individualised, depending on obstetric factors, the presence or absence of varices and thrombocytopenia, and associated comorbidities.

Cesárea en paciente con trombosis portal crónica y trombocitopenia: reporte de caso

Palabras clave:
Anestesia
Cesárea
Trombocitopenia

RESUMEN

Presentamos el caso de una gestante a término con síndrome antifosfolípido primario, trombosis portal crónica, esplenomegalia masiva, varices esofágicas y trombocitopenia. La paciente fue sometida a una cesárea electiva bajo anestesia general para minimizar el riesgo de ruptura del bazo y de las varices, con un resultado favorable para la madre y el neonato.

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* *Corresponding author at*: Departamento de Anestesiología, Hospital Nuestra Señora de Sonsoles, Avenida Juan Carlos I, s/n 05071, Ávila, Spain.
E-mail address: teresina1234@hotmail.es (T. López Correa).

Embarazo abdominal
Trombosis

La trombosis portal crónica es una patología poco frecuente, motivada por distintas causas, principalmente las diátesis trombóticas. Induce un aumento de la presión portal, con desarrollo de circulación colateral, esplenomegalia y trombocipenia. La gestación en estas condiciones se considera de alto riesgo, pero no está contraindicada si la patología está estabilizada. El manejo de estas pacientes debe ser multidisciplinar y su seguimiento estrecho; el diagnóstico y tratamiento de las posibles varices esofágicas es esencial. La decisión sobre el modo de finalizar la gestación y el manejo anestésico deben individualizarse en cada caso, en función de factores obstétricos, de la presencia o no de varices y trombocitopenia, y de las comorbilidades asociadas.

Clinical case

Having obtained approval from the Ethics Committee of our institution, we present the case of a 29 year-old, 74 kg, pregnant woman at term, diagnosed three years before, because of miscarriage, with a primary anti-phospholipid syndrome, chronic portal vein thrombosis, massive splenomegaly and thrombocytopenia. This thrombosis led to portal hypertension with oesophageal varices, splenorenal collateral circulation and arterioportal fistulae. Anticoagulation with acenocoumarol was initiated following diagnosis. The patient was then switched to enoxaparin 60 mg and acetyl salicylic acid 100 mg daily when she expressed her wish of becoming pregnant again. She was also taken to oesophago-gastroscopy, ruling out the presence of varicose lesions requiring endoscopic treatment. The course of the pregnancy was uneventful and the patient was scheduled for elective caesarean section due to the risk of spleen rupture during labour.

On exploration, there were no pathological cardiorespiratory findings or difficult airway predictors. On the day of surgery, the patient had 56 000 platelets mm^{-3} (Table 1); SaO_2 was 85%, and she had no dyspnoea, respiratory distress or cyanosis. The patient was pre-medicated with ranitidine 50 mg, metoclopramide 10 mg and cefazolin 2 g IV 1 h before the intervention. On arrival at the operating room, 2 large vein and radial artery lines were established, a bladder catheter was placed, and transfusion of a pool of platelets was initiated. After 3 min of pre-oxygenation, rapid sequence induction was started using rocuronium 1 mg kg^{-1}, propofol 2 mg kg^{-1}, remifentanil 1 mcg kg^{-1} and Sellick's manoeuvre; intubation was successful on the first attempt without substantial variations in blood pressure. Foetal delivery was assisted with a sucker, and no abdominal compression was used. Until that moment, anaesthesia was maintained with 100% O_2 and 1% sevoflurane. FiO_2 was then reduced to 50%, sevoflurane administration was interrupted and remifentanil perfusion was initiated (in order to avoid blood pressure or heart rate increases of more than 20%) together with propofol perfusion (for BIS between 40 and 60). Before the end of the intervention, the patient received IV paracetamol 1 g, metamizol magnesium 2 g, morphine hydrochloride 10 g and ondansetron 4 mg, as well as sugammadex 200 mg before emergence and extubation, with full neuromuscular blockade recovery. Once the placenta was removed, oxytocin perfusion was initiated per protocol.

The procedure was uneventful, resulting in the birth of a female neonate who did not need resuscitation (1 min and 5–10 min Apgar 9 and 10, respectively). The immediate course was satisfactory, with normal bleeding and no need for additional platelet transfusion or the use of other blood products. Post-operative testing showed 43 000 platelets mm^{-3} and 65% prothrombin activity, with the rest of the coagulation parameters being normal (Table 1). Enoxaparin treatment was resumed 14 h after the intervention with 40 mg/24 h and 60 mg/24 h after the second day. The patient was discharged on day 5, with no remarkable events. Oral anticoagulation was restarted after one month, and enoxaparin was discontinued when the INR was higher than 2. There were no remarkable events during the postpartum period. At six months, the patient was readmitted twice due to abdominal pain associated with symptomatic cholelithiasis in the first instance, and with the degree of splenomegaly in the second instance. In view of the adequate response to the medical treatment and the high anaesthetic and surgical risk, the decision was to perform regular follow-up. At that time, the patient was Child–Pugh B7, and treatment with propranolol was initiated for primary prophylaxis of upper gastrointestinal bleeding.

Table 1 – Peri-operative test results.

Parameter	On the day of the caesarean section	Post-operative day 1	One month after surgery
Haemoglobin (g dL^{-1})	11.6	10.0	12.8
Platelents (mm^{-3})	53 000	43 000	48 000
Prothrombin activity (%)	78	65	60
INR	1.16	1.4	1.37
aPTT (s)	33.3	36.5	40.4
aPTT (ratio)	1.07	1.17	1.30
Fibrinogen (mg dL^{-1})	165	213	133

Source: Authors.

Discussion

Portal vein thrombosis, in the absence of cirrhosis or hepatobiliary tumours, is an infrequent condition, usu-