CASE REPORT

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Pregnancy in scar from previous cesarean section: surgical challenge in its outcome

Embarazo en cicatriz de cesárea anterior: reto quirúrgico en su desenlace

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ABSTRACT

Pregnancy in the cesarean scar consists of the implantation of the blastocyst in the scar tissue of a previous cesarean section. Timely diagnosis allows therapeutic possibilities. Inadequate management or expectant management may be related to adverse outcomes. Its therapy should be oriented to the resection of the ectopic pregnancy according to maternal conditions and reproductive desires. We report a case of pregnancy in a previous cesarean section scar treated at the Hospital Nacional Dos de Mayo, Lima, Peru.

Key words: Ultrasonography, Hysterectomy, Cesarean section, scar

RESUMEN

El embarazo en la cicatriz de cesárea consiste en la implantación del blastocisto en el tejido cicatricial de una cesárea previa. El diagnóstico oportuno permite posibilidades terapéuticas. Un manejo inadecuado o conducta expectante puede relacionarse a resultados adversos. Su terapéutica debe estar orientada a la extracción del tejido ovular, de acuerdo con las condiciones maternas y deseos genésicos. Se comunica un caso de embarazo en cicatriz de cesárea previa atendido en el Hospital Nacional Dos de Mayo, Lima, Perú.

Palabras clave: Ecografía, Histerectomía, Cesárea, cicatriz

Introducción

Previous cesarean scar pregnancy (PCSP) consists of the implantation of a fertilized ovum in scar tissue from a previous cesarean section[1,2]. The frequency of cases has increased due to the increase in cesarean sections worldwide, without a standardized treatment protocol[3-5]. Expectant management is associated with adverse outcomes, such as uterine rupture, the placenta accreta spectrum and maternal-fetal death[6-9].

The most frequent symptoms are vaginal bleeding and pelvic pain. Transvaginal and/or pelvic ultrasound findings are of importance for early diagnosis. An empty uterine cavity and endocervical canal, a gestational sac located between the bladder and the uterine wall, and myometrial thickness are mainly described to define the type of PCSP[8-10].

Therapeutics should be oriented to the resection of ovarian tissue. Medical treatment with methotrexate is the therapy with the most adverse repercussions. The surgical options are hysteroscopically guided curettage, laparoscopy, hysterotomy and hysterectomy. The choice will depend on maternal conditions and reproductive desires[5,6,8].

There are few national reports of this pathology. The case presented occurred in a national hospital.

Case report

A 34-year-old pregnant woman who did not remember the date of her last menstrual period, with a history of two cesarean sections and a uterine curettage for incomplete abortion without complications, was admitted to the emergency room of the Hospital Nacional Dos de Mayo, Lima, Peru, for vaginal bleeding of 4 days. She had a gestational age of $12^{4/7}$ weeks by ultrasound, without relevant observation.

On physical examination, she appeared hemodynamically stable, with soft abdomen and hypogastric pain. Speculoscopy showed scant bleeding through the cervical os. On vaginal examination, the uterus was mobile, measuring 14 x 7 cm. Ultrasonography showed a 143 x 75 mm uterus, gestational sac in the isthmus with vascular flow, 65 mm crown-rump fetus with cardiac activity. The placentation was observed at the level of the previous cesarean scar and the myometrium was 2.1 mm thick. The uterine cavity appeared empty at the fundus with a 10 mm decidualized endometrium. The uterine cervix measured 19 mm and the Douglas cul-de-sac was free (Figures 1 and 2). Laboratory analysis showed no abnormalities.

An exploratory laparotomy was performed. The findings were: uterus measuring 10 x 10 x 9 cm with a gestational sac located in the scar of the previous cesarean section involving the posterior wall of the bladder and part of the right broad ligament. Twenty IU of vasopressin diluted in 20 mL of 0.9% ClNa was administered locally in the described area. When the bladder serosa was released, a 2 cm continuity solution was observed with protrusion of the gestational sac and placenta. The posterior bladder wall was incidentally injured, and the entire gestational sac was enucleated. Hysterectomy was performed with preservation of the adnexa, without other complications (Figures 3 and 4). The patient

Figure 1. A. Single active 13-week 3 days pregnancy by crown-rump length. B. Location of the pregnancy in anterior scar zone and its relationship to the bladder.

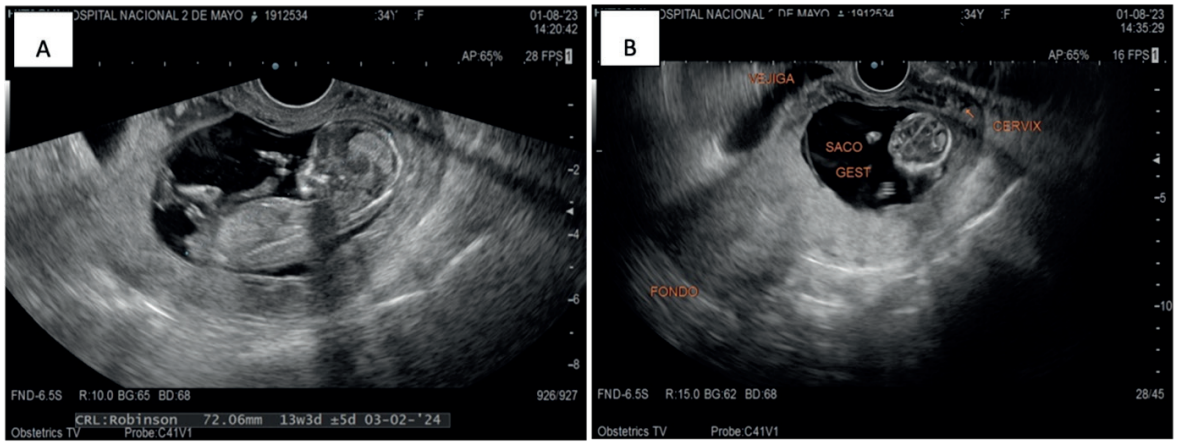


Figure 2. A. Doppler flow surrounding the gestational sac. B. Pregnancy at the level of the previous scar, with myometrial thickness of 2.1 mm.

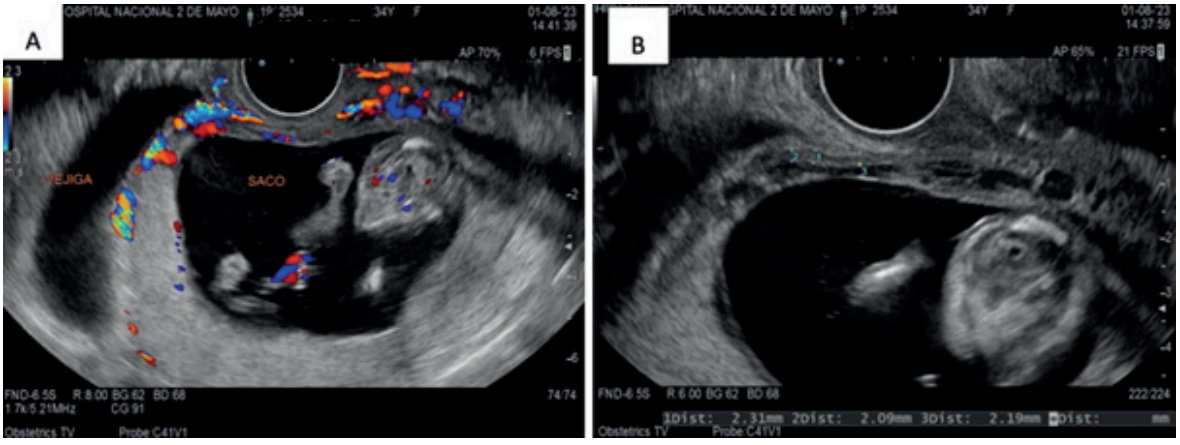


Figure 3. A. Pregnancy in the scar of previous cesarean section, with release of the posterior bladder wall. B. Protrusion of the gestational sac through the scar.

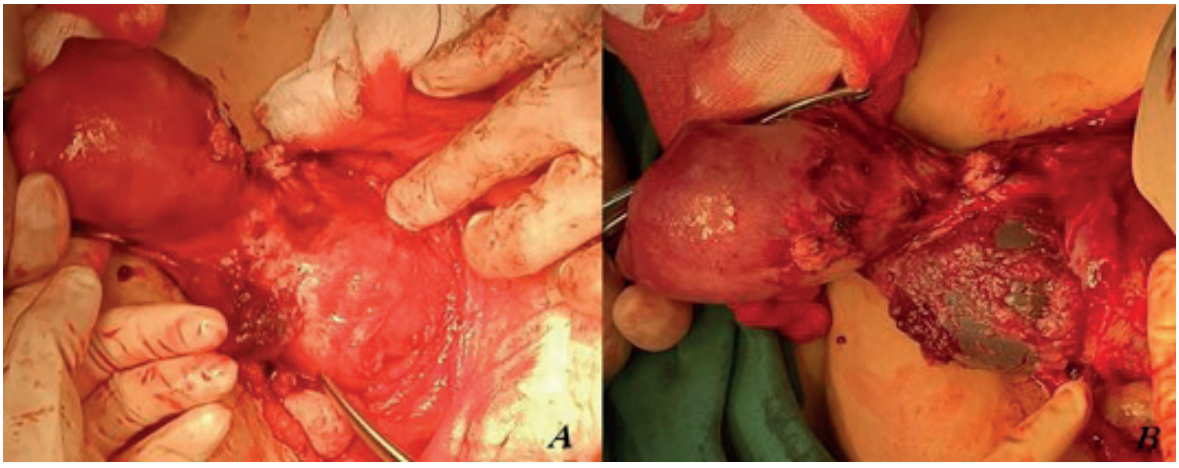
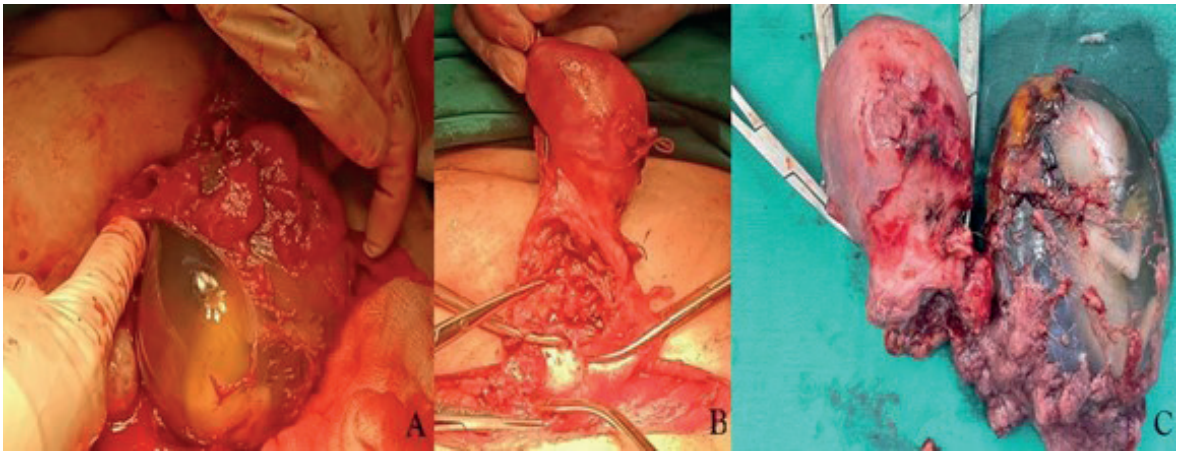


Figure 4. A. Excision of the gestational sac and fetus. B. Implantation in the previous cesarean scar. C. Surgical specimen.



evolved favorably, and medical discharge was indicated on the 4th postoperative day with bladder catheterization for 21 days. After the week outpatient control, the bladder catheter was removed. The pathological anatomy confirmed the diagnosis of PCSP, as well as the placenta accreta spectrum.

Discussion

PCSP has an increased number of communications in the last decades due to the higher frequency of cesarean sections. Casana[5] and Tipiani[9] report adverse maternal and fetal outcomes due to late diagnosis and expectant management.

Morente[4] informs in his series of cases the diversity of clinical presentation, the association of common symptoms and risk factors, which could guide to timely diagnosis and management.

Silva[2], Huo[7] and Zhang[8] present ultrasound findings that could be potential predictors of risk and mortality. Our case was compatible with a type IIIb PCSP, i.e., located in the scar area, with a myometrial thickness <3 mm, according to Huo's classification[7]. Silva[2] reports that this type of case shows association with the placenta accreta spectrum, the need for hysterectomy and blood loss greater than 3,500 mL, in addition to significant maternal morbidity and mortality.

The treatment of this pathology is not standardized, and there are several therapeutic options[4]. In our case, given the characteristics of the clinical picture, the ultrasound findings, and the absence of genessic desire, hysterectomy was considered the best therapeutic option.

This coincides with Morente[4], Zhang[8] and Tipiani[9], on the evidence that surgical therapy is the definitive treatment, according to the types of PSCP. The same is expressed by Miller[1] with a

2C degree of evidence, the main objective being to preserve maternal health and fertility as the second objective, avoiding systemic treatments with a lower success rate and/or higher probability of complications, as stated by Tipiani[9] and Pardina[10]. Morlando[3] finds up to 18% recurrence of the disease in subsequent pregnancies and 4% will be complicated with the placenta accreta spectrum.

It is concluded that, based on the complexity and high maternal morbidity of this complication, definitive surgical treatment is safer than expectant management or minimally invasive conservative treatment, especially if the gestational age is advanced.

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