

Atypical locations of ectopic pregnancy: Challenging aspects of surgical approach

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Introduction

Ectopic pregnancy (EP) is the implantation of the zygote outside the uterine cavity. This scenario take place in 6.4 per 1000 pregnancies according to Hoover and col. in the US.¹ EP are located in the fallopian tube in 98% of cases.² However, atypical locations exist such as cornual, ovarian, cervical, over cesarean scar and intraabdominal.

Risk factors are related with anatomical uterine/tubal abnormality such as pelvic inflammatory disease, previous tubal surgery, history of ectopic pregnancy, previous tubal ligation, assisted reproductive procedures, current smoking, among others.^{3,4} EP is responsible for approximately 10% of maternal mortality rate.⁵ The overall conception rate after an ectopic pregnancy is 60 to 80 percent. In 16% of future pregnancies occurs spontaneous abortion and in 30% recurrent E P, only one third will be born alive.^{6,7}

Early diagnosis decreases morbidity and mortality rates and is critical for the success rate of future pregnancies.

Treatment of EP involves a medical or surgical approach. Medical treatment with methotrexate is feasible in 1/3 of tubal ectopic pregnancies while in the rest of cases surgical approach if performed by laparoscopic salpingectomy.⁸

There are no established guidelines for medical or surgical treatment of atypical location ectopic pregnancies (ALEP) given its low frequency. Treatment selection depends on localization, hemodynamic stability, and future fertility desire.

The ALEP tends to receive more radical surgical treatments such as hysterectomy or adnexectomy producing a negative impact on fertility. In this report of a single institution in Buenos Aires (Argentina), we expose our experience in surgical approach of ALEP.

Objective

Report a series of cases of ALEP in Sanatorio Güemes, evaluating feasibility of fertility conservation in cases that involve uterine structure.

Methods

We performed a retrospective observational study of the surgical approach of ectopic pregnancy in Sanatorio Güemes, from June 2017 to February 2020 by reviewing institutional electronic medical records. In our institution, ectopic pregnancies represent 15 of 1000 pregnancies. Between the study period we made diagnosis of ectopic pregnancy in 85 patients. Of these, 87% were tubal, 5.9% cesarean scar, 2.4% cornual, 2.4% cervical and the others were ovarian and abdominal ectopic pregnancies (Figure 1). From these 85 cases, we analyzed 11 (13%) that represent atypical localization ectopic pregnancies (ALEP).

We analyzed and described 11 cases of ALEP: 5 cesarean scar (Figure 2), 2 cornual (Figure 3), 2 cervical, 1 ovarian and 1 abdominal (Figure 4). The variables analyzed were type or surgery, bleeding, blood transfusions needed, hospital stay and uterine conservation rate.

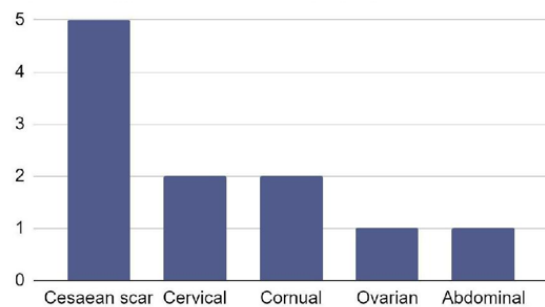


Figure 1 Atypical localization ectopic pregnancies.



Figure 2 Cesarean scar ectopic pregnancy in an hysterectomy surgical piece from a patient with no fertility desire.

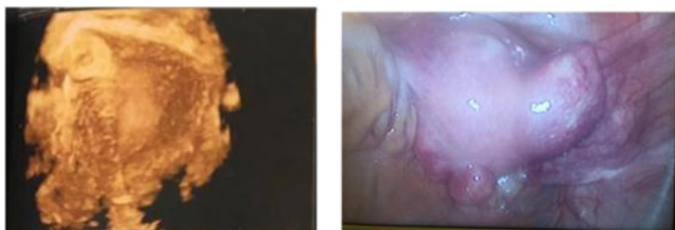


Figure 3 Cornual ectopic pregnancy. Left: 3D ultrasonography. Right: laparoscopic view.



Figure 4 Resection of abdominal ectopic pregnancy.

In cases of cesarean scar pregnancy and cornual that uterine conservation was feasible, ectopic pregnancy with the surrounding tissue are removed followed by the suturing of the uterine defect.

Results

From the ones that compromise uterine structure, we made a fertility sparing surgery in 66% of the patients (6) (wedge resection and repair of the implantation site) whilst in 33% we performed a hysterectomy. Average surgery time was 88 minutes (40 to 180min).

Regarding surgery approach, 45% were solved via laparoscopy and 27% required blood transfusion. Average hospital stay after procedure was 2 days.⁹⁻¹¹

Conclusion

ALEP is an infrequent scenario with a high rate of hysterectomy having a negative impact in future fertility of our patients. Uterine

conservative surgical approach is a reasonable option when specialized surgeons and the correct selection of the patient are available.

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Conflicts of interest

All authors declare any financial interest with respect to this manuscript.

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