

SUCCESSFUL EMBRYO ASPIRATION AND PRESERVATION OF INTRAUTERINE PREGNANCY IN A HETEROTOPIC CESAREAN SCAR PREGNANCY

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Background

Heterotopic Pregnancy is defined as simultaneous gestations that most commonly occurs at an intrauterine site accompanied by a tubal ectopic site¹.

HP is considered rare in spontaneous conception with an incidence around 1/30,000 but much higher within pregnancies conceived via assisted reproductive technology (ART), reaching up to 1%².

Heterotopic Cesarean Scar Pregnancy (HCSP) is the rarest type of heterotopic pregnancy where an intrauterine embryo coexists with a cesarean scar ectopic pregnancy. It presents with a high risk of uterine rupture and massive hemorrhage³.

The first case was reported in 2003 by Salomon and colleagues and only 12 cases have been reported so far, all diagnosed by Transvaginal Ultrasound (TVUS) during 1st trimester. However, there are still no universal clinical guidelines for optimal management³.

Nonetheless, preservation of the ongoing intrauterine pregnancy and the patient's future fertility are key in all approaches described for management of HCSP.

Case

34 year old lady, G2 P1 A0, presented to the clinic for secondary infertility since 5 Years.

She has a significant history of previous C-section 6 years ago following In-vitro Fertilization (IVF) due to male factor infertility.

Pregnancy successful after 3rd IVF attempt with β hCG level of 678mIU/ml 14 days after embryo transfer.

Follow up TVUS at 6wks of gestation showed an intrauterine gestational sac combined with another gestational sac present in the previous cesarean section scar, both containing living embryos: diagnosed to have a **Heterotopic Cesarean Scar Pregnancy**

The patient's desire to maintain the intrauterine pregnancy led to the decision to perform a Selective Embryo Reduction with an US-Guided Embryo Aspiration of the CSP at 7 weeks of gestation.

Ultrasound repeated two weeks later showed a decrease in size of the cesarean scar gestational sac.

Complete resolution occurred during the pregnancy course and preservation of the intrauterine pregnancy was successful.

Discussion

Management of HCSP is made more difficult by the need to preserve the viable intrauterine pregnancy especially if the patient has been not been able to naturally conceive.

In our case, HCSP was diagnosed at 6 weeks of gestation: the ectopic embryo small and brittle enough to allow for successful aspiration without the need to use adjunctive medical treatment such as Potassium Chloride or local Methotrexate injection and risk the termination of both pregnancies.

We decided to perform an **Ultrasound-guided Embryo Aspiration** due to simplicity of the procedure and low risk of operative blood loss and threat to the intrauterine embryo³.

It is uncertain if this technique might or might not be the preferred choice if HCSP was diagnosed at a later gestational age due to increase in size and maturity of the ectopic embryo and risk of massive bleeding³.



Review of the literature:

2 cases: laparoscopic/hysteroscopic excision

7 cases: selective embryonic reduction with injection of KCl or embryo aspiration

1 case: systemic MTX for termination of both pregnancies

1 case: expectant management (spontaneous incomplete abortion and intrauterine pregnancy preserved)

No standard treatment protocol^{3, 5}

→ 8/9: live births c-sect at 30–38 wks GA

→ Expectant management not for living CSP

Conclusion

With increasing use of C-sections and ART, HCSP incidence will inevitably rise. Obstetricians should be aware of the possibility of HCSP to detect it at an **early gestational age** and to choose the most **appropriate management** plan with the **lowest risk of complications** possible.

Our case suggests that with an HCSP diagnosed early during the pregnancy, **Selective Embryo Aspiration Under Ultrasound Guidance** is a successful method to terminate the ectopic pregnancy in a HCSP without risk of harming the intrauterine pregnancy.

Nonetheless, more HCSP cases should be reported in the literature to be able to explore optimal management strategies.

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