

## Conservative Management of an Intramyometrial Ectopic Pregnancy

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Received Date: October 15, 2016 Accepted Date: October 19, 2016 Published Date: October 21, 2016

Citation: Illia R (2016) Pregnancy Evolution after Trachelectomy for Cervical Cancer. *Matern Complicat Womens Health J* 1: 1-2.

### Introduction

Ectopic pregnancy (EP) has been estimated to complicate approximately 2% of pregnancies. Intramural pregnancy (IMEP) refers to a pregnancy located within the uterine wall, completely surrounded by myometrium and separate from the uterine cavity. This type of pregnancy is extremely rare, and constitutes less than 1% of EP. It was first reported by Doederlein et al in 1913 [1].

The etiology of intramural pregnancy is unclear and may result from increased lytic activity of the syncytiotrophoblast, which allows the conceptus to penetrate the myometrium. The most important risk factor is a previous uterine trauma (ie: surgical or infectious origin), resulting in a sinus tract within the endometrium (ie: previous dilatation and curettage, c-section, or myomectomy). Also the implantation on a focus of intramural adenomyosis or from a difficult embryo transfer following in vitro Fertilization [2].

As the pregnancy progresses, the gestational sac bulges from the serosal surface of the uterus with progressive thinning of the myometrium. This may lead to a uterine rupture and the need for a hysterectomy, thus, early diagnosis is important [2]. The development of a variety of conservative measures has reduced the need for surgical intervention [3]. We report a case of intramural pregnancy with a viable embryo, in a woman who was treated medically with systemic methotrexate injection.

### Case Report

A 33 years old patient, gravida 2, para 1, was seen in our Service for vaginal bloody staining at 8 weeks gestation. A transvaginal pelvic ultrasound was performed (Figure 1). A diagnosis of intramyometrial pregnancy was made. The Beta-HCG level was 31.000 UI/l.



Figure: 1.

In view of her parity and future fertility, it was decided to manage the patient medically with methotrexate, in order to reduce trophoblastic activity and improve conditions for conserving surgery. Two doses of 50mg of methotrexate (MTX) were administered intramuscularly with four days apart.

A new transvaginal ultrasound was made one week later. It still remains an intramyometrial GS, containing a not viable embryo, who measured 21 mm, who showed absence of cardiac activity. The Beta-HCG level was 13.000 UI/l. We decided to perform a manual intrauterine aspiration and the patient was discharged the next day with no further complications. The products of conception were sent for histological analysis. Histological review demonstrated that the specimen contain chorionic tissue.

A repeated weekly scans demonstrated the same findings but the pregnancy sac was regressing. The Beta-hCG level was less than 10 on eight week after surgical approach, while the sac still remains, but in regression.

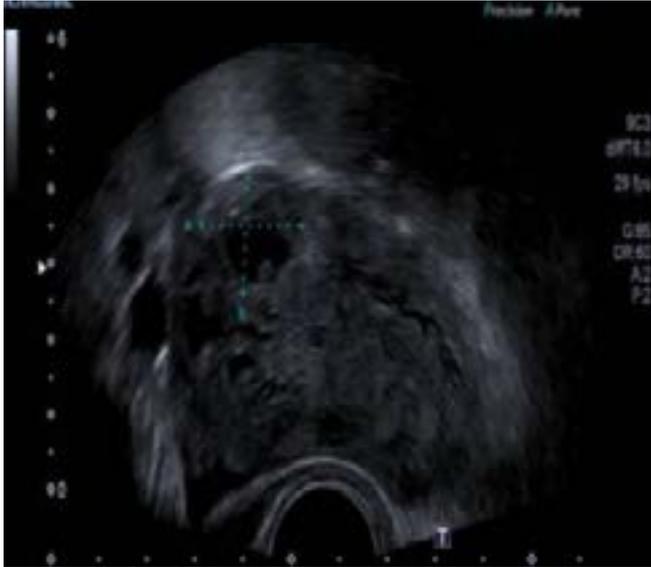


Figure:2.

## Comments

Diagnosis of IMEP is difficult with imaging techniques, often leading to misdiagnosis. Consequent late management exposes women to risk of uterine rupture and indeed most cases of IMEP are only diagnosed during the surgical management of unexpected and weird uterine rupture during first trimester pregnancy [4].

The standard non-surgical treatment of ectopic pregnancy is intramuscular MTX injection which is associated with a high success rate of up to 87 %. However, previous studies have demonstrated that intramuscular MTX is less effective for ectopic pregnancies in less common locations including cervical, cornual, interstitial, cesarean scar and intramyometrial sites especially when detected late [4].

Intramyometrial pregnancy is a very weird type of ectopic pregnancy and it should be kept in mind by ob-gyn because it can become a life threatening condition. Early diagnosis is therefore very important, since it makes conservative treatment possible and helps to preserve fertility.

## References

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