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Case report

Coexistent Mole And Fetus: A Case Report

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ABSTRACT

Hydatidiform moles are genetically abnormal conceptions which are associated with an increased risk of development of persistent trophoblastic disease and choriocarcinoma. A molar pregnancy is an abnormality of placenta, caused by a problem at the time of fertilization. It occurs in 1 out of every 1000 pregnancy. The incidence of live fetus associated with hydatiform mole is extremely rare[1]. While h.mole without fetus in united states has a reported incidence of 1 in 2000Pregnancies,the incidence of hydatiform mole with coexisting fetus varies from 1:10,000 to 1:100,000 pregnancy[2] A case of coexistent mole and fetus is reported. A 22 yrs old female with four months amenorrhea presented with nausea,vomiting . Ultrasound scan showed grape like clusters and a viable fetus with hydrocephalus. The β-HCG levels, alpha feto protein were markedly raised while estriol levels were normal suggesting fetal anomalies.

1. Introduction

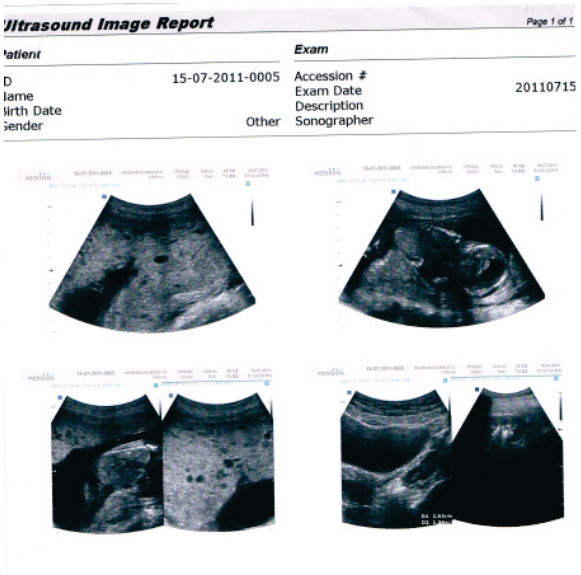
Gestational trophoblastic disease is a spectrum of disease which includes hydatiform mole ,invasive mole and choriocarcinoma .In a normal pregnancy, the trophoblast infiltrates the maternal tissues,invades the vessels,and can be transported to lungs.[1, 3]The chorion and amnion are derived from the trophoblast as it attaches to the maternal wall. Abnormal proliferation of the trophoblast leads to the development of a molar pregnancy. Hydatiform mole is the most common and benign of the trophoblastic disease.This can be complete mole or partial mole. Etiology of Hydatiform mole is unknown. It has been conceded that there is a primary trophoblastic Abnormality. Death of a embryo in a twin pregnancy has been assumed to be a initiating factor. Coexistent mole and fetus is a variation of molar pregnancy.

2. Case presentation and investigations

A 22 yrs old, gravid 2 para 1 presented with 4 months amenorrhea She complained of severe nausea, vomiting and fever. Gravid uterus was larger than the corresponding dates [2].

2.1. On ultrasound

Multiple tiny vesicles were present in the placenta all over with single live fetus with variable presentation & gross congenital anomaly (hydrocephalus), gestational age 16 weeks. S/O coexistent hydatiform mole & fetus. as shown in figure[1]



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2.2. Blood investigations

The maternal blood was investigated for β – HCG levels, AFP Levels, estriol, PAPP-A. The thyroid hormones were also estimated. The values are given in table[1].

Table[1] laboratory investigation

TEST MATERNAL	RESULT	UNIT	RANGE
β-HCG Time since conception 2ND Trimester	731625	mIU/ml	2500 - 82000
ALPHA FETOPROTEIN (AFP)	650.9	ng/ml	38.6
ESTRIOL, UNCONJUGATED	2.35	ng/ml	1.4-6.5
PAPP A	9.68	mIU/ml	0.1 – 10.0
Thyroid profile			
Total T3	185. 28	ng/dl	60 – 181
Total T4	11.16	ug/dl	4.5 – 10.9
TSH	0.03	uIU/ml	0.3 – 5.6

3. Result and Discussion

In this case ,the β – HCG levels are higher than in normal pregnancy .Trophoblastic cells of both normal placentas and GTD make a hormone called human chorionic gonadotropin (HCG), which is vital in supporting a pregnancy. A complete mole usually releases more HCG than a normal placenta, so finding higher than expected HCG levels in the blood can be a sign that a complete mole is present. However, not all women with GTD have HCG levels that are higher than those seen in a normal pregnancy. For example, most women with partial moles or placental site trophoblastic tumors have normal or only slightly increased HCG levels.

The maternal serum AFPlevels are raised in our patient. Raised maternal serum AFP concentrations in hydatidiform mole are extremely uncommon, since the major source of maternal AFP is the fetal liver[4]. Nevertheless, evidence of AFP synthesis by abnormal trophoblastic tissue has been reported[5]. Although the reason for the raised maternal concentration is unclear, there are two likely explanations. Firstly, the altered permeability of the molar tissue may allow increased diffusion of AFP into the maternal circulation. Secondly, abnormal synthesis of AFP by molar tissue cannot be excluded in this patient. MSAFP screening has low sensitivity for fetal ydrocephalus and is rarely elevated in isolated cases. However, when fetal hydrocephalus is detected, elevated MSAFP levels indicate that the fettus is at significant risk to have additional malformations. [6] It is generally used for detecting neural tube defects, but it can also indicate: abdominal wall defects esophageal and duodenal atresia, some renal and urinary tract anomalies turner syndrome, some low birth weight fetuses, and placental complications.

The serum Triiodothyronine and tetraiodothyronine are mildly raised and thyroid stimulating hormone is markedly decreased. Human chorionic gonadotropin (hCG), which has thyrotropic activity, is believed to be responsible for hyperthyroidism of gestational trophoblastic activity and hyperemesis gravidarum. [7].

PAPP-A levels were within normal range in our patient. PAPP-A is produced by the placental trophoblasts, especially, by the extravillous cytotrophoblasts [8]. It is a 'protease' for insulin-like growth factor (IGF) binding proteins 4 and 5[9]. This means it has the ability to help release IGF from these binding proteins so that it is free to interact with its cell receptor [10] IGF is thought to play an important role in trophoblast invasion and hence the early development and vascularization of the placenta and the placental bed. It has been postulated that low levels of PAPP-A, resulting in less release of IGF, could be a pathway by which placentation abnormalities occur that culminate in these poor pregnancy outcomes

The unconjugated estriol levels were within normal range in our case study. The amount of estriol in maternal serum is dependent upon a viable fetus, a properly functioning placenta, and maternal well-being. Estriol tends to be lower when Down syndrome is present and when there is adrenal hypoplasia with anencephaly.

The triple screen measures not only AFP, but beta-hCG and unconjugated estriol (uE3) as well .In our case, β – HCG levels were raised The AFP levels were high indicating fetal anomalies though the PAPP-A Levels and serum estriol levels were within normal range.The thyoid hormones were raised due to high β – HCG levels as explained above.On ultrasound, the fetus showed hydrocephalus and placenta was grape like, indicating hydatiform mole.

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