INTRODUCTION

Cases of hydatidiform mole (HM) coexisting with a fetus have recently become more common as a result of an increase in the incidence of multiple pregnancy arising from ovulation induction therapy and in vitro fertilization. HMs may be partial mole (PM) or complete mole (CM) depending on their gross appearance, immunohistochemistry and karyotype. PMs usually have a triploid karyotype, derived from maternal and paternal origins and they are positive for p57 antibody on immunohistochemistry, whereas CMs are diploid and have paternal origins only, therefore, they are negative for p57 stain.

Coexistence of a viable fetus with a hydatidiform mole is a rare condition with an estimated frequency of 1 in 22,000 to 100,000 pregnancies. Most cases suffer severe complications such as pre-eclampsia, abortion and preterm delivery or termination immediately after diagnosis. Delivery of viable infants from this condition is even rarer.

Early diagnosis is very important because of the risk of developing severe complications in pregnancy. In most cases, termination of pregnancy is recommended when the diagnosis is made in early pregnancy. In the case of a normal fetal karyotype, it is justifiable to await developments in the absence of maternal complications.

CASE REPORT

A 27-year female in her second pregnancy, presented for booking after having her pregnancy confirmed by urine pregnancy test. Her present pregnancy was a result of treatment with clomiphene citrate 50 mg daily for 5 days, owing to failure to conceive for 4 years. At 13 weeks, ultrasound showed dichorionic-triamniotic pregnancy (Figure 1).

The patient had severe nausea and vomiting throughout her first trimester, for which she was given supportive treatment from time to time. Ultrasound at the 22nd week of gestation showed 3 alive fetuses and tiny cystic spaces in the left half of anteriorly lying placenta. Hydropic degeneration in one placenta was also noted (Figure 2). Oncology consultant was sought for the partial hydatidiform mole. Keeping in view normal development and growth of all three fetuses and absence of any maternal complications, pregnancy was decided to be continued with close monitoring of β-hCG and Ultrasound. Her β-hCG at 23 weeks was 748 mLU/ml, which continued to rise until the 29th week of gestation to a level of 305881.68 mLU/ml and declined gradually thereafter. Similarly, hydropic change in placenta also continued to increase progressively. She was given steroid cover at 32 weeks and delivery was aimed at 34 weeks of gestation. The patient went into preterm labour at 33 weeks and 3 female infants delivered by lower segment cesarean section (LSCS) followed by removal of 3 placentae along with copious molar tissue at the end. The newborns were kept in the nursery, non-requiring assisted ventilation and discharged in satisfactory condition. The histopathology and immunohistochemistry confirmed the diagnosis of a quadruplet pregnancy comprising of one complete mole with 3 normal placentae.

Key Words: Complete hydatidiform mole. Quadruplet pregnancy. Multiple pregnancy.
Three female babies with 3 complete placentae delivered, weighing 1.6 - 1.8 kg each, none required ventilator support. Copious amount of trophoblastic vesicular tissue was also removed at the end (Figure 3).

Dichorionic-triamniotic placenta with part of one placental disc showing numerous vesicular structures (Figure 3).

On microscopy, the normal appearing placenta showed mature chorionic villi with normal fetal membranes and umbilical cords. However, the vesicular structures reveal diffusely dilated chorionic villi with cistern formation and trophoblastic proliferation (Figure 4). Nucleated RBCs were not identified. The trophoblastic cells were negative for p57 immunostain (Figure 4 inset). Based on all these findings, a diagnosis of complete hydatidiform mole complicating a quadruplet pregnancy was made. The molar tissue was considered to be derived from the fourth conceptus.

**DISCUSSION**

CHM (complete hydatidiform mole) occurring with multiple living fetuses is very rare. There are very few case reports of quadruplet pregnancy with complete mole. However, all pregnancies ended up before 25 weeks, either due to obstetric or maternal complications. Prenatal diagnosis of coexistent mole and fetus can depend upon the clinical symptoms and signs, physical examination, sonographic findings, and abnormal biochemical data. Clinically, the patient may present with hyperemesis, hyperthyroidism, vaginal spotting or even heavy bleeding, pregnancy-induced hypertension and larger-than-gestational age uterus. Our patient had no clinical symptom of molar pregnancy and this was an accidental finding on ultrasound. Although it is possible in most cases to diagnose CHM from 11 - 12 weeks of gestation. Amano reported diagnosis of CHM coexisting with multiple fetuses at 18 weeks of gestation. Suspicion of molar change, in this case, was made at 22 weeks, which is quite an usually delayed diagnosis. Very frequent diagnosis is easily be made during the first trimester scan. However, diagnosing multiple pregnancy using ultrasound, the focus is naturally on the fetuses, which may lead to other possible findings being overlooked. Although the present case resulted in a favourable outcome, a review of the 14 reported cases suggests high fetal loss rate (90%).

In a large study by Vaisbuch et al., they reported 130 cases of twins with CHMF (complete hydatidiform mole and coexistent fetus) pregnancy of which 41% were terminated because of the positive probability of serious maternal complications. Once the suspicion of molar change was made on ultrasound, serial β-hCG levels showed a rise from 748 mIU/ml at 23 weeks upto 305881 mIU/ml at 29 weeks and a gradual decline thereafter to non-pregnancy level 12 weeks postpartum.

Women with hydatidiform mole are at risk of preterm delivery (PTD). Neimann in 2007 revealed that the risk of PTD after a diploid mole with a viable fetus is similar to that after a singleton molar pregnancy. Literature review of previously reported cases involving quadruplets or triplets with a complete hydatidiform mole revealed all cases ended as premature non-viable fetuses. However, our patient successfully completed 33 weeks of gestation and achieved viability with a multidisciplinary approach.

The histological distinction between partial and complete hydatidiform moles can be difficult due to a number of overlapping features. Therefore, for a more definitive diagnosis, immunohistochemical stain p57 was applied; p57 staining is helpful in separating a complete mole from a partial mole. It is a paternally imprinted protein and expressed predominantly from maternal allele in most tissues; not expressed in complete hydatidiform moles. In partial mole, maternal genes are present and expressed. Therefore, p57 is immunoreactive in the cytotrophoblastic cells lining the chorionic villi. In this case, p57 was negative confirming the morphological diagnosis of complete hydatidiform mole.

The risk of persistent trophoblastic disease (PTD) is the same as in the case of a singleton complete mole. The
patient was followed-up with serial β-hCG, which became normal in 12 weeks postpartum.

REFERENCES


