Intermittent Urinary Retention Secondary to a Cervical Leiomyoma

Joseph Eigbefoh, Dorcas Onuminyan, John Abebe
Department of Obstetric and Gynaecology, Irrua Specialist Teaching Hospital, PMB 8, Irrua, Edo State

Abstract
A rare case of intemittent acute urinary retention secondary to impacted posteriorly sited cervical fibroid in a 34 year old nulliparous woman is deescribed. She presented with a two year history of progressive lower abdominal swelling and a one year history of recurrent urinary retention. She had a preoperative diagnosis of impacted posteriorly sited uterine leiomyoma with anterior displacement of the cervix. At laparotomy however, a huge intramural cervical fibroid was found in the posterior part of the cervix measuring 14cm? 12cm extending superiorly to the lower uterine segment and inferiorly into the pouch of Douglas. It completely filled the pelvis and displaced the cervix anteriorly. The uterus was of normal size. A myomectomy with excision of the fibroid was performed. Urinary retention completely resolved after surgery.

Introduction

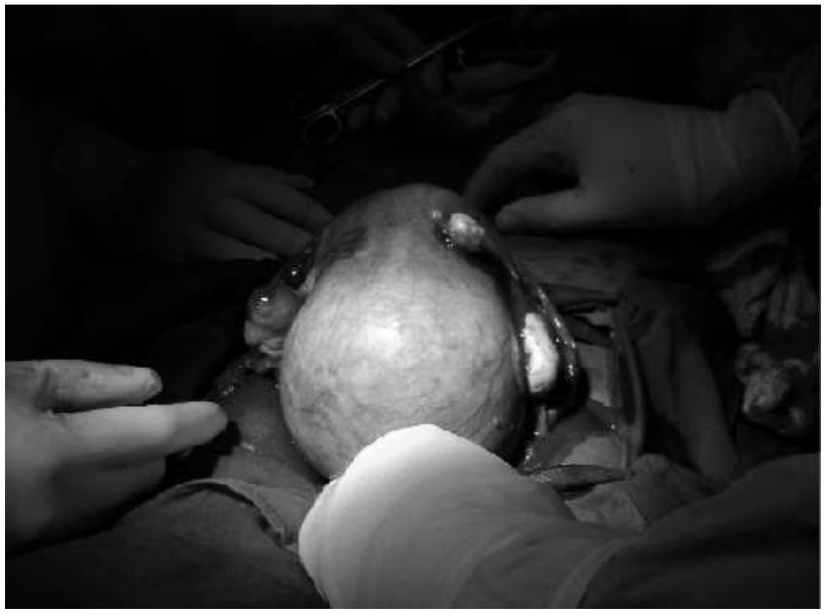
Urinary retention rarely affects reproductive-age women. In obstructive retention, the source must be determined and then removed to allow the patient to void normally. The most common causes of obstructive retention are gynecologic surgery and pelvic masses. When a mass such as the retroverted gravid uterus, a cervical fibroid, an ovarian cyst, or a fibroid in the posterior uterine wall crowds the pelvic space, occasionally the mass fails to clear the promontory of the sacrum and becomes impacted in the pelvis. The mass then fills the pelvis, displacing and compressing the lower urinary tract and inciting acute urinary retention.[13] . Acute urinary retention is treated initially by catheterization, but the cause must be determined to allow definitive treatment. Cervical fibroids constitute 1-2 % of the total fibroids and are rare[4]. Cervical leiomyomas may be the cause of urinary retention in reproductive-age females without other aetiologies. We report a case of a 34 year old woman with intermittent urinary due to a large cervical leiomyoma.

Case Report

Miss. E.D was a 34 year old woman, para 0+[4.] She was a clerical officer with a private hospital in Auchi, Edo state Nigeria. She presented with a two year history of progressive lower abdominal swelling and a one year history of intermittent urinary retention. Lower abdominal swelling was not associated with pain. There was no change in her menstrual cycle and she did not have dysmenorrhea. She normally bleeds for two to three days in a regular cycle of 28 to 30 days. She had no enteric symptoms or history of weight loss. She had no symptoms of dysuria or increased urinary fequency. She presented with 4 episodes of intermittent urinary retention over a one year period. The episodes occuring on waking up in the morning. The first three episodes abated after administration of

Correspondence: Dr Joseph Eigbefoh, ISTH, PMB 8, Irrua, Edo State, Nigeria
E-mail: eigbefoh2003@yahoo.com

Figure 1: Posterior surface of the uterus with huge cervical fibroid oviducts & ovaries



frusemide in her place of work. This was done by her employer who is a medical doctor. The last episode of urinary retention occurred four days before presentation in this hospital. It was relieved only after catheterization. She was then verbally refeerred to this hospital as a case of 'bladder stones' with urinary retention. She was a known asthmatic but not hypertensive or diabetic. She was unmarried and was not desirous of pregnancy. She lived with her parents. She was the first out of four children in a monogamous family setting. Both parents were primary school teachers. She neither smoked cigarretes nor consumed alcholic beverages.

On examination she appeared generally well. She was not pale, jandiced or febrile to touch. Finding on abdominopelvic examination were: The urethral catheter was insitu. There was an abdominopelvic mass of about 18 week's size. On per vaginal examination the uterus was felt separate from the mass. The posterior mass was round and firm filling the pelvis completely and extending into the abdomen and downwards into the pouch of Douglas and filling the adnexae. The uterus appeared continous with the mass. The ccervical lips were thinned out and was displaced anteriorly, tucked under the symphysis pubis. A clinical impression of an incacerated retroverted uterus due to posteriorly sited subserous fibroid was made.

Abdominopelvic ultrasound scan revealed an acutely retroverted uterus with a posteriorly sited submucous fibroid. There was in addition hydronephrosis and hydroureter on ultrasound scan. Urine microcopy culture yielded no growth. Electrolytes and Urea was within normal limits. The haemoglobin concentration, packed cell volume, white cell count and platelet count were within normal limits.
She was counselled and prepared for surgery. At laparotomy, the uterine size was normal and was atop a huge intramural cervical fibroid of about 18 weeks size located in the posterior aspect of the cervix and displacing the cervix anteriorly. It

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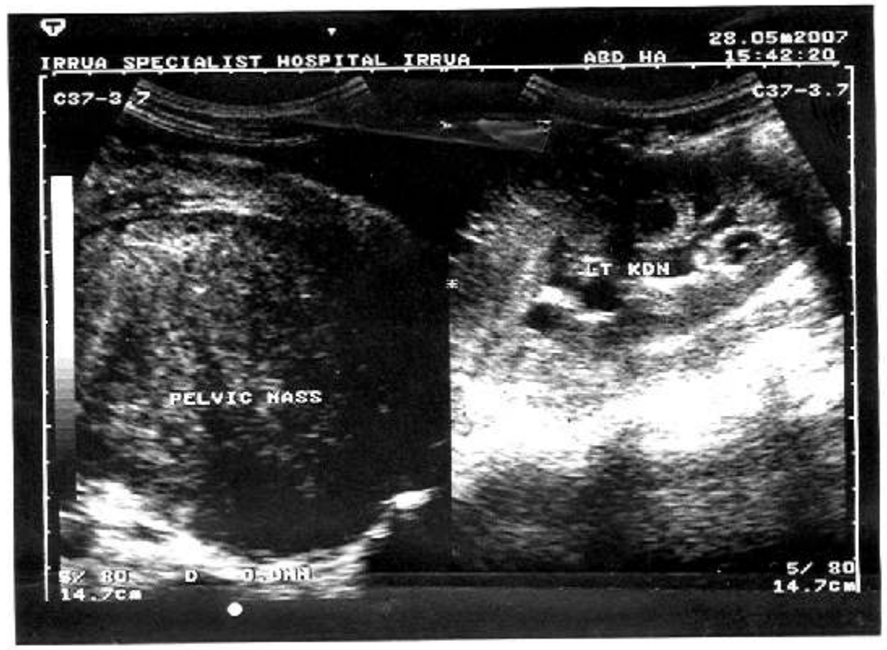
Figure 2: Trans-abdominal ultrasound scan displaying an impacted pelvic mass posterior to the uterus. Left kidney is displayed on the right with evidence of hydronephrosis



measured 14cm x12cm, completely filling the pelvis and extending into the abdomen. Superiorly it extended into the lower uerine segment and into the pouch of Douglas inferiorly. The tubes and ovaries were healthy bilaterally. The fibroid was enucleated via a vertical incision on the posterior part of the mass. The urethral catheter was removed one day after surgery. Blood loss was 200ml. The postoperative period was uneventfull. Urinary retention abated completely postoperatively. She was discharged one week after surgery. She has been problem free since disharge

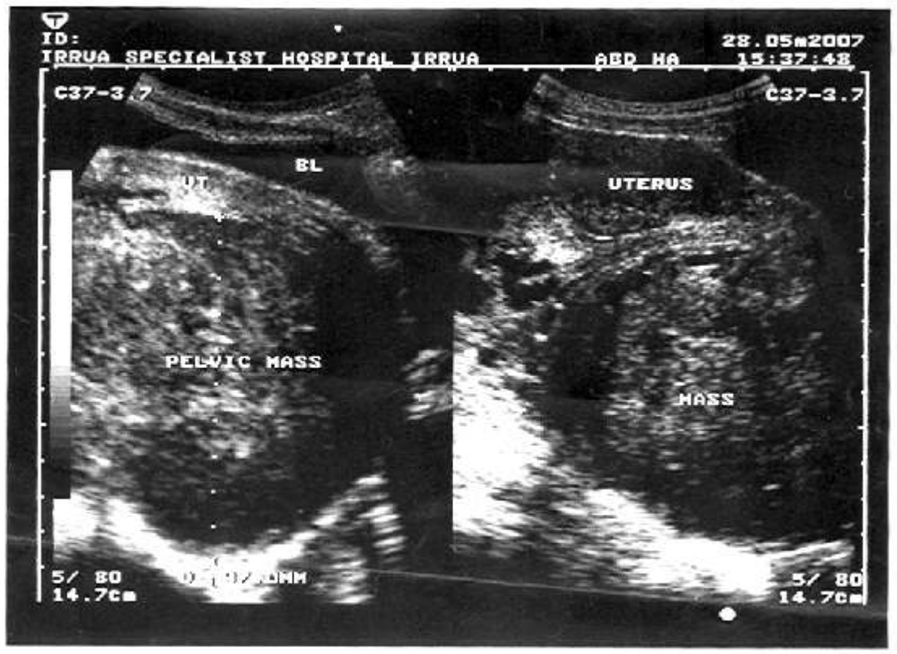
Discussion

This is the first case of cervical fibroid associated with urinary retention reported from this hospital. The hospital since inception in 1993 has served as a regional referral centre for 6 states with a combined population of 10 million.

Urinary retention is an uncommon presentation in women in the reproductive age group. The differentials include uterine prolapse and impacted pelvic mass. Miss E.D presented with a one year history of intermittent urinary retention due to impacted cervical fibroid. The preoperative diagnosis (clinical and trans abdominal scan (TAS)) was: posterior uterine fibroid. Definitive diagnosis only being made intraoperatively.

Multiple reasons exist for urinary retention associated with an impacted pelvic mass. Similar obstruction exists in patients with uterine prolapse. Although the results of urodynamic studies are similar in both prolapse and an impacted pelvic mass, studies done using trans-vaginal ultrasound scans (TVS), revealed a different mechanism of voiding dysfunction in the latter disorder. Transabdominal scan (TAS) done in this

Figure 3: Ultrasound scan showing pelvic mass posterior to the uterus



patient suggested the possibility of an impacted pelvic mass with urinary retention. Previous reports of such cases[1,2] similar to findings in this patient document the inability of Transabdominal Scan (TAS) to identify the anteriorly displaced cervix . The impression of an anteriorly displaced cervix could only be made clinically in this patient. Transvaginal sonography on the other hand can more clearly delineate the abnormality. Transvaginal sonography (TVS) will usually reveal displacement of the cervix superiorly and anteriorly by the impacted mass, compressing the lower bladder and causing it to override the internal urethral orifice. This was not obvious from transabdominal ultrasonography in this patient.

Unlike with prolapse, transvaginal sonography (TVS) in patients with an impacted pelvic mass usually reveals the urethrovesical junction at a normal level behind the symphysis pubis, and non restriction of urethral mobility.[5,6] The finding from patients with impacted pelvic masses reveals that, it is the anteriorly and superiorly displaced cervix that compressed the lower bladder and interfered with drainage into the urethra. The urethra itself is not compressed or attenuated [6]. Extrapolating this finding from other authors may explain the urinary obstruction in our patient with an impacted cervical fibroid.

The four episodes of urinary obstruction in this patient occurred on waking up in the morning. This is easily explained. During the day, irritability from the compressed bladder probably causes urinary frequency, so that frequent micturition prevents bladder over distension. When the patient stands, urine accumulates in the lower part of the bladder, serving as a cushion to prevent lower bladder collapse and thus keeping the pathway to the

internal urethral orifice patent. However, in the supine position, the upper portion of the bladder is dependent; therefore, urine collects there by gravity, and the cushioning effect is lost. The upper bladder may even exert pressure on the uterus, indirectly aggravating lower bladder compression. A vicious cycle ensues, particularly if there has been excessive fluid intake. Eventually the lower bladder collapses, and the internal urethral orifice is blocked. The collapsed part of the bladder may be mistaken for part of the proximal urethra on sonography, leading to a misunderstanding of the mechanism of obstruction.[6,7]

In the erect position, trying to void may be similar to trying to unplug a sink full of water. The more water in the sink, the more pressure it exerts on the plug, and the more difficult it is to pull the plug. The Valsalva maneuver merely adds further pressure on the impacted mass, leading to further lower bladder compression. The presence of hydronephrosis and hydroureters is indicative of chronic obstruction with back flow effect.

Based on the mechanism of the obstruction, the following conservative measures are suggested to avoid urinary retention with impacted pelvic masses : limit fluid intake before sleep; change from the supine to the prone position for a while before getting up to go to the toilet; lean forward when initiating voiding; avoid any Valsalva maneuver; and use a Credé maneuver to initiate or maintain voiding[7]. It is possible that the three previous episodes of urinary retention were relieved by any of these procedures albeit inadvertently rather than the administered frusemide. Catheterization may be necessary if these measures fail. Definitive surgery however usually effects a cure.

The patient late presentation at a tertiary health care facility signifies the tragedy of the health care delivery system. The diagnosis was missed and inappropriate therapy given for a period of one year. The development of hydronephrosis and hydroureter at presentation highlights this. Urinary retention is rare in women in the reproductive age group. Timely and appropriate diagnosis and referral will stem possible adverse complications

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Twin Gestation Consisting of Hydatidiform Mole and a Live Fetus: A Case Report

Olalekan I Oyinloye and Adekunle.Y Abdulkadir
Department of Radiology, University of Ilorin Teaching Hospital, Ilorin, Nigeria

Abstract

Twin gestation consisting of hydatidiform mole and a live fetus is a rare entity. A 22-year-old gravida 2 para 1+0, 1 alive patient presented with 14 weeks amenorrhoea and vaginal bleeding. Ultrasonography revealed hydatidiform mole and a viable fetus. She had suction curettage at 16weeks gestational age because of heavy vaginal bleeding.

Histology confirmed benign hydatidiform mole. Urinary HCG level declined progressively and was negative by 4 weeks post-evacuation. Eight months after, she was 20 weeks gravid. She had uneventful pregnancy, labour and delivery of a baby boy. The baby (now a year old) and the mother remain well.

Keywords: Hydatidiform Mole, Single Fetus, Twin Gestation, Ultrasonography

Introduction

Hydatidiform mole (HM) with a coexistent of live fetus is a rare occurrence. The incidence is about 1 in 10 000 to 1 in 100 000 pregnancies[1,2]. Molar pregnancies result from the abnormal contribution of genetic material from the egg and sperm[1-5]. Traditionally, there are two possible conditions: a partial mole with an abnormal triploid fetus and a complete mole combined with a normal fetus and placenta[3]. Presentations commonly include first or second trimester vaginal bleeding, rapid uterine enlargement, excessive uterine size for dates, hyperemesis gravidarum or preclampsia before 24 weeks[4].

Ultrasonography is a vital diagnostic tool in this condition and has a role to guide its evacuation[4-7]. Recently, MRI has been used for prenatal diagnosis of molar pregnancy [8]. Other important diagnostic tools include urinary and serum human chorionic gonadotrophin (hCG) titre, DNA typing and histopathology[3].

Nigeria, with approximately 1 in every 22-35 deliveries as twins, has one of the highest twinning rate in the world [9]. However, as far as we are aware only two cases of molar gestation coexisting with a live foetus have been reported in Nigeria [10, 11], with both from the south eastern zone, implying also the rarity of this condition in Nigeria.

We present a case of twin gestation consisting of an HM and a live fetus in a Nigerian woman diagnosed at 12weeks gestation during routine ultrasonography at the fetal monitoring unit of University of Ilorin Teaching Hospital, Nigeria. Pregnancy had to be terminated abruptly at 16weeks gestation because of uncontrollable antepartum haemorrhage.

Case Report

A 22 yr old, Gravida 2 para 1 + ^{O} presented

Correspondence: Dr. O.I. Oyinloye, Department of Radiology, University of Ilorin Teaching Hospital, Ilorin, Nigeria. E-mail: Oyinbuk2001@yahoo.com

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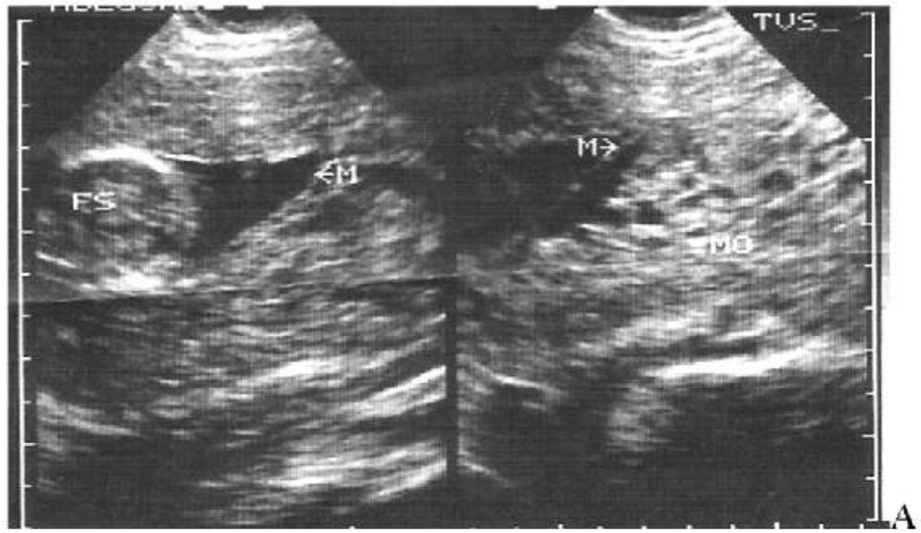
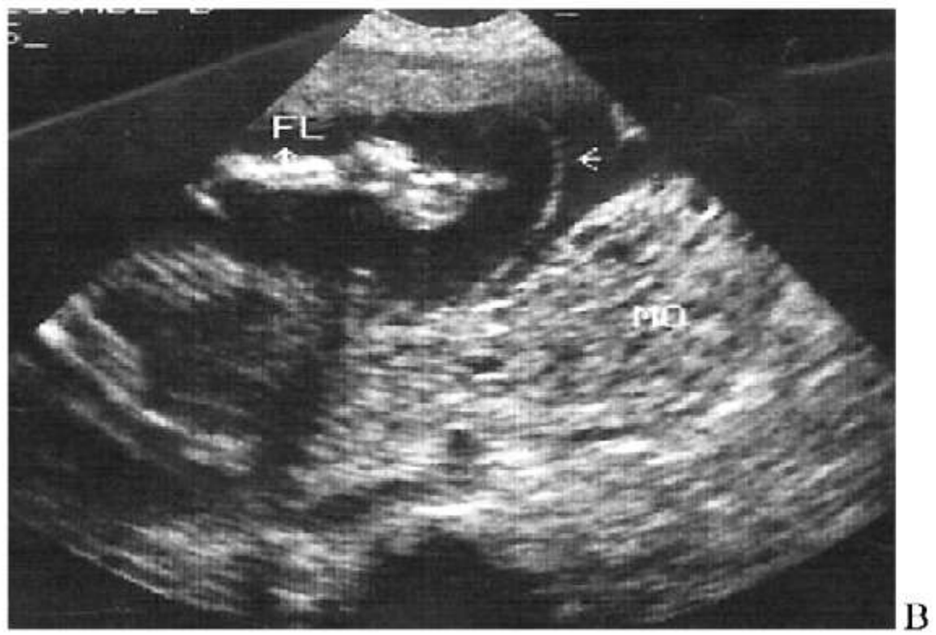
Fig 1a & b; showing twin gestation consisting of a live fetus at 14weeks gestation and a complete mole. Note the fetal skull (FS), femur length (FL), molar tissue (MO) and amniotic membrane (M).





with intermittent spotting of blood of one-week duration. She has been amenorrhoiec for 14 weeks prior to presentation. Physical examination revealed fundal height of 18 weeks duration in a normotensive woman. Ultrasound examination revealed two sacs (fig.1). The leading sac in the lower uterine segment showed mixed echogenic area with intervening cysts giving a 'snow storm' appearance which is characteristic of molar pregnancy. The second sac contained a live fetus of 14weeks gestational age with

regular cardiac activity, adequate amniotic fluid volume and anteriorly situated placenta in the body of the uterus. A thin membrane separated these sacs suggesting diamniotic twins (Figures 1a and 1b). Laboratory work up shows raised serial urinary human chorionic gonadotrpin (hCG) titre of about 2, 000, 000 IU/L. full blood count and LFT were normal. Pack cell volume (PCV) was 25%.

A week later, patient was admitted due to worsened intermittent vaginal bleeding. PCV had fallen to 21%. Repeated US still confirmed a live fetus. Pregnancy was therapeutically terminated at 16weeks of gestation via suction evacuation because of severe anaemia from uncontrollable ante partum haemorrhage. Histological examination showed benign hydatidiform mole. Patient remained stable and serial urine hCG level progressively diminished overtime and became negative from 4 weeks post-evacuation. Chest radiograph post-up and abdominopelvic ultrasound were normal. Eight months after evacuation, she was confirmed to be 20weeks gravid by ultrasound. She had an uneventful antenatal period, labour and delivery. Presently the patient is stable, and both mother and baby are well one year after delivery.

Discussion

Gestational trophoblastic disease of pregnancy otherwise known as HM can be separated into two entities with respect to cytogenetics, histopathology and morphology[3, 4, 12]. Firstly complete HM, which consists entirely of malformed placental tissues forming grape-like, clusters. The genetic component in a complete mole is diploid and is entirely of paternally inherited chromosome. About 90% are 46XX, theorized to originate from a single sperm fertilizing a nullisomic egg followed by duplication of all chromosomes. However, a small percentage of heterozygous 46XX or XY karyotype believed to arise when 2 sperms fertilize a nullisomic egg can also occur[3, 4, 12].

Secondly, partial mole with ascertainable embryo, umbilical cord or an amniotic membrane and consists only focal changes of placenta villi and trophoblast. It has a triploid karoytype, usually from dispermy leading to 23 maternal and 46 heterozygous paternal chromosomes[3, 4, 12].
Therefore, HM with a coexisting fetus can be established by the partial mole syndrome or by a twin pregnancy where the other conceptus has degenerated into a mole[3].

HM is generally a disease of a fertile woman of reproductive age group as in this case presentation. However, cases of molar pregnancy occurring in postmenopausal woman have been documented. Ozumba et al [10] reported a case of HM co-existing with normal pregnancy in an apparently menopausal 56-year-old woman in Southeastern Nigeria. Garcia et al[13] also reported molar gestation in a 61-year-ld post-menopausal woman in the United States of America.

Prenatal diagnosis of coexisting mole and fetus can depend upon the clinical symptoms, signs, physical examination sonographic findings and abnormal biochemical data and cytogenetic analysis. Patients with molar pregnancy, most commonly present in the first or second trimester with vaginal bleeding, rapid uterine enlargement, and excessive uterine size for dates, hyperemesis gravidarum or preclampsia before 24 weeks [4]. Hyperthyroidism and Pregnancy Induced hypertension have been observed in some cases of molar gestation[5, 14]. However, these conditions may not always be present, our patient was normotensive and had no hyperemesis but presented with vaginal spotting and big for date uterus.

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An early and correct diagnosis is imperative to plan subsequent management of such patients [5-7]. Ultrasound plays the most important role in the diagnosis of this condition [4-7]. The typical ultrasonographic findings of a complete molar pregnancy consist of an enlarged uterus,echogenic regions representing molar tissue, and uniformly distributed cystic spaces ranging from few mm to 30mm which are due to the hydrophilic villi seen within the molar tissue given a snowstorm appearance [4]. This should be differentiated from a missed abortion with its degenerated gestational sac, especially during the early pregnancy, or a partially necrotic leiomyoma which can produce a similar appearance[4, 5, 15].

Ultrasound also allows the number of fetuses, placentae and site of placental implantations to be determined. Most importantly it helps to determine presence of foetal anomalies and viability. In addition to being the best method for the diagnosis of HM, ultrasound is also used in the surgical treatment of the mole by suction evacuation under ultrasonic guidance.[6] Recently MRI is being used in some centers [8]. However, its high cost and relative unavailability may limit it use in the developing world.

In this patient, ultrasound revealed a normally appearing foetus with good cardiac activity and a normal anteriorly located placental. The second sac devoid of a fetus, consists of placenta tissues composed of complex cysts with intervening echogenic septa suggestive of HM. HM co-existing with live fetus or fetuses generally presents a management dilemma between clinicians and parent on whether to continue or terminate pregnancy immediately. At present there are limited data to guide the antenatal management of twin pregnancy consisting of HM and a coexisting foetus [4]. However, many clinicians have advocated that Patients who desire to continue pregnancy after such a diagnosis must be cautioned about the potential for severe medical complication like heavy vaginal bleeding and pre-eclampsia which usually warrants termination or pregnancy[4]. In this case presentation pregnancy was terminated on account of uncontrollable heavy vaginal bleeding and moderate anemia. More-so patients should be advised of the high risk for developing gestational trophoblastic neoplasia . A one in four chance of live birth, about 35% risk to develop persistent trophoblastic disease after delivery and at least 20% risk of an early onset of pre-eclampsia have been reported in association with molar pregnancy[15]. In addition such women have a 29% risk of fetal loss due to late miscarriage, intrauterine death and neonatal death[15].

The treatment of this condition is evacuation of the uterus, and vacuum aspiration is considered the method of choice, as opposed to medical induction using oxytoxic drug, which is thought to carry an increased risk of persistent trophoblastic disease [7, 11]. A procedure of the evacuation of complete HM by vacuum suction and continuous ultrasonic monitoring has also been advocated [6]. Because of the possibility of progression to malgnant trophoblastic disease, careful and prolonged follow-up of such women is required. In this case presentation, Urinary HCG level was undetectable 4 weeks after evacuation. Eight months after evacuation, she was 20 weeks gravid. She had uneventful pregnancy, labour and delivery of a baby boy. The baby (now a year old) and the mother remain well.

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