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Incidence and Outcomes of Hydatidiform Mole in Basra Maternity Hospital

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Abstract

Objective: To determine the incidence and outcome of molar pregnancy in Basra maternity and child hospital.

Methods: 55 cases of molar pregnancy had been diagnosed by clinical history, physical examination and investigations especially ultrasound scan. Those patients were managed as primary measure by dilatation and curettage once or twice depend on the case and then followed by serial βHCG measurement.

Those with persistent rise HCG despite treatment or with persistent bleeding classified as persistent gestational trophoblastic disease and referred to chemotherapy.

Results: current study shows that the incidence of molar pregnancy in our hospital about 5.2% mainly recorded among those with age of 30-39 years, multiparus patients and those with low socioeconomic class.

Vaginal bleeding was the most common presenting symptom among attendants, less commonly hyperemesis gravidarum and large for date uterus.

Molar pregnancy was seen more commonly in those with previous history of molar pregnancy (19.10%) and those with history of previous abortion (21.2%).

81.8% of cases shows complete remission after they had their first and/ or second evacuation, only 9.1% of cases they had persistent gestational trophoblastic disease for which they were shifted for chemotherapy.

Conclusion: In conclusion early ultrasound examination which remain the main pool in the diagnosis of molar pregnancy is mandatory for those patients with history of early pregnancy bleeding, hyperemesis gravidarum and large for date uterus.

Because 9.1% of cases remain as persistent gestational trophoblastic disease despite their first and / or second evacuation so serial measurement of βHCG is mandatory for all cases so that early detection and management of persistent gestational trophoblastic disease will be most beneficious for those patient.

Keywords: Hydatidiform Mole, Incidence, Outcomes, Basra

Introduction: Gestational trophoblastic disease is a term commonly applied to a spectrum of interrelated diseases originating from the placental trophoblast [1].

Despite the rarity of these illness, patients generally have very successful outcomes with over all cure rate in excess of 95% [2].

Gestational trophoblastic tumors produce human chorionic gonadotrophin which is important in the diagnosis, management and follow up of these patient, providing an example of an ideal tumors marker [2, 3].

The incidence of hydatidiform mole varies from 0.5 – 2.5 per 1000 pregnancies. A striking features of the epidemiology of hydatidiform mole is the wide differences in incidence reported from different parts of the world with a higher incidence in Asiatic countries and Africa than in the western world for examples, the incidence in Indonesia 1: 85 pregnancies, Taiwan 1: 120 pregnancies, Japan 1: 522 pregnancies, and the incidence in Europe and North America is about 1: 2000 pregnancies. In Iraq incidence is 1: 221 pregnancies [4,5] . Many studies support the view that the differences in incidence are geographical or environmental rather than racial [9,11].

Historically the incidence of partial mole and complete molar pregnancies have been reported approximately 3: 1000 and 1: 1000 respectively [2].

Risk Factors for Hydatidiform Mole: Demography (Age: Higher risk in teens and women over 40, Parity: Increased with high parity, influenced by maternal age, Socioeconomic: Malnutrition and low socioeconomic status are linked to higher risk.), Geographic: Higher incidence in Asia and Africa, Ethnicity: Greater risk in American Indians and UK Asians, others such Obstetric History, genetic, blood groups and nutritional factors had a big role in developing and recurred of hydatidiform mole. [9, 10].

Classification: Premalignant: Complete and partial mole, malignant: Invasive mole, choriocarcinoma, placental site tumors.

Clinical Presentation: Complete Mole, Common signs include vaginal bleeding, hyperemesis, hyperthyroidism, uterine enlargement, early preeclampsia, and theca lutein cysts. While Partial Mole: Symptoms resemble incomplete abortion, with rare cases of uterine enlargement, preeclampsia, or hyperemesis. [7, 8, 9, 14, 15, 16]

Complication of H. *mole :* Trophoblastic embolism: [3,15], Infection: [4,9] , Perforation of the uterus: [3,4,17], Hemorrhage: [2,18], Disseminated intravascular coagulopathy [2,3,17], and Persistent trophoblastic disease[2,14,30].

Control: 1-Medical care: Stabilize the patient, Transfuse for anemia, correct any coagulopathy, Treat hypertension. [2, 3, 11, 15, 19]

2- Surgical care: [2, 3, 4, 15, 19, 21, 29, 30]

Suction curettage is the method of choice for evacuation of complete molar pregnancies. Others such Oxytocic therapy, Prostaglandin and Hysterectomy consider as an another modalities of treatment.

Follow Up: All molar pregnancy should be registered for an HCG follow up system, [4, 18, and 19]. Contraception, for 6-12 months, [2,4,20,21] also Post molar pregnancy surveillance patients showing the indication for chemotherapy . [2, 21, 22, 23].

Prognosis: Current mortality from mole has been practically reduced to zero, where
About 90% of patients with molar pregnancy have spontaneous remission after evacuation [2, 30].
20% have persistent trophoblastic disease after evacuation, ([2, 3, 30].
5 – 10% have a locally invasive molar after evacuation [2, 7, 29].
3% have choriocarcinoma particularly following complete mole [2, 14, 30].

Aims: To study the incidence of hydatidiform mole gestation among pregnant woman attending to Basrah Maternity and Child Hospital during the period of study, also to assess the distribution of H. mole cases according to expected determinants, and to looking for its fates

Material and method:

- **Design**: A descriptive prospective study in Basrah maternity and child hospital.

Material and methods:
Materials and Methods
Study Design
This retrospective cohort study was conducted at [Hospital/Institution Name] over a period from [start date] to [end date]. The study aimed to evaluate the incidence and outcomes of hydatidiform mole among women diagnosed during this period.
Study Population
We included all women diagnosed with hydatidiform mole based on histopathological examination. Exclusion criteria comprised incomplete medical records, gestational trophoblastic neoplasia, and cases with multiple gestations.
Data Collection
Clinical data were extracted from electronic medical records, including demographic information (age, parity), clinical presentation, ultrasound findings, and histopathological results. Outcome measures included incidence rates, treatment modalities (surgical management, follow-up), and complications (e.g., persistent trophoblastic disease).
Tools of the diagnosis: .
1-clinical presentation. [1,2,3,9], ***Labratroy Study***: [1,2,3,11,12] (Quantitative βHCG level greater than 100,000 mIU /ml indicate exuberant trophoblastic growth and raise suspicion that a molar pregnancy should be excluded . A molar pregnancy may have a normal HCG level, Complete blood cell count. Anemia is a common medical complication, Coagulation profile. To exclude DIC and

d- Liver function test and renal function test .
f- Blood should be typed and cross matched .

3-Imaging Study : [3,5,7,14]

1-Ultrasonography .Is the criterion standard for identifying both complete and partial molar pregnancies . The classic image is of a snow storm pattern indicating hydropic chorionic villi .
2-Once molar pregnancy is diagnosed a base line chest radiograph should be taken .

4-Histologic finding : [2,3,15,16,18]

1-Complete Mole: Fetal tissue is absent, severe trophoblastic proliferation and diffused hydropic villi .
2- Partial mole : Fetal tissue is often present as well as amnoin and fetal red blood cell , focal hydropic villi and trophoblastic proliferation are also observed.

Statistical Analysis

Descriptive statistics were used to summarize the data. Incidence rates were calculated per 1,000 pregnancies. The Chi-square test was utilized to compare categorical variables, while continuous variables were analyzed using t-tests. A p-value of <0.05 was considered statistically significant. All analyses were performed using [statistical software, e.g., SPSS, R].

Ethical Considerations

Ethical approval was obtained from the [Institutional Review Board/ Ethics Committee]. Patient confidentiality was maintained by anonymizing data.
This study adhered to STROBE guidelines for reporting observational studies.

Results: From 10412 pregnant women attended Basra maternity and child hospital, of them 55 patients presented with molar pregnancy so the incidence was about 52/1000.
Higher incidence (38.2%) among the age of (30-39) years, multiparus women (parity ≤ 5) (58.1%) while lower incidence below 20 years (16.4%) and primiparus only (23.6%) of cases. regarding obstetrical history; 21.8% of cases had history of previous abortion , (19.1%) presented after previous molar pregnancy but only (5.5%) of cases had history of multiple pregnancy and more than halve of cases (52.7%) had no previous obstetrical history.

Vaginal bleeding most common presenting symptoms (76.4%), while only (5.5%) large for date uterus

Regarding fates:

Most cases (81.8%) had complete remission after evacuation of the uterus by D&C either once or twice while persistent trophpblastic disease that required cytotoxic therapy after evacuation was recorded in (9.1%) of cases, only two (3.6%) of them ended with hysterectomy and three (5.5%) were lost from follow up.

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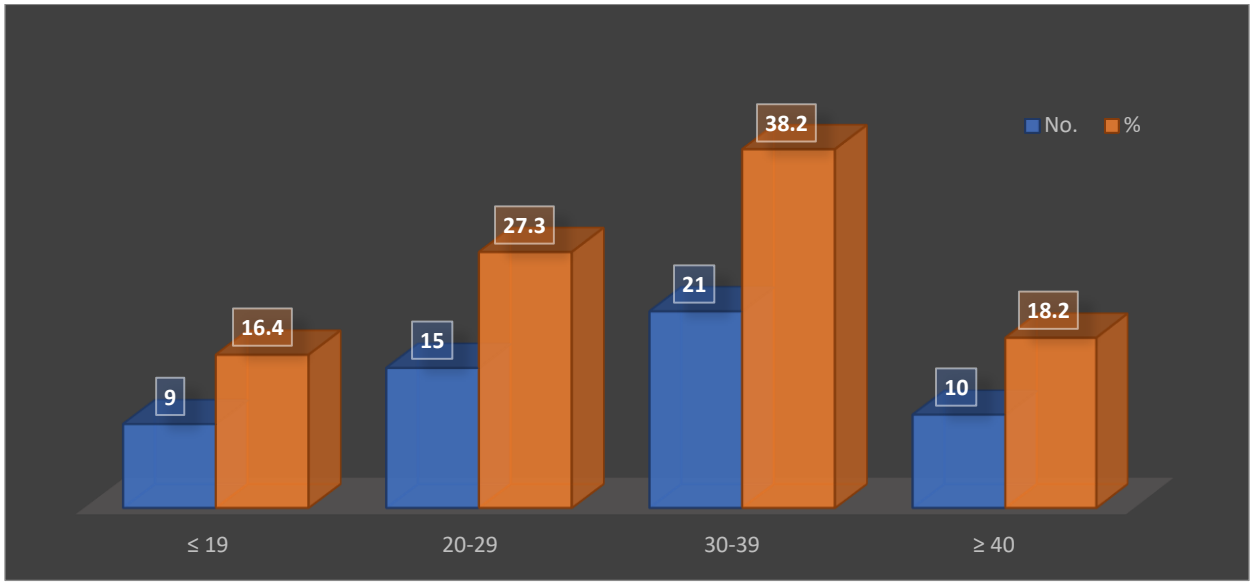


Figure (1): Distribution of the Cases According to Age.

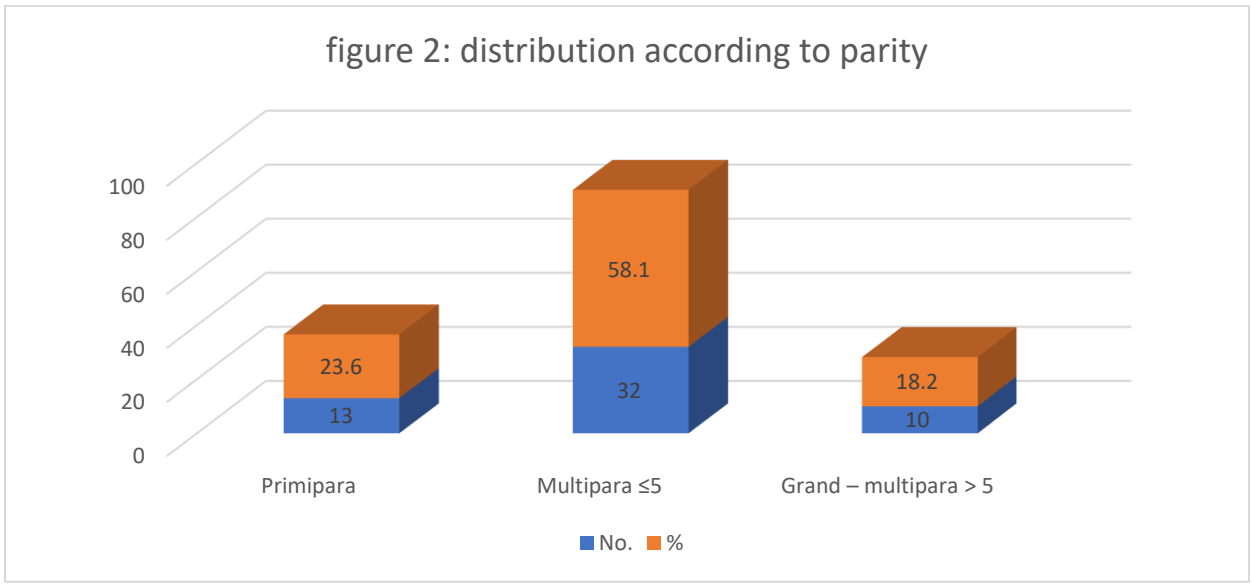
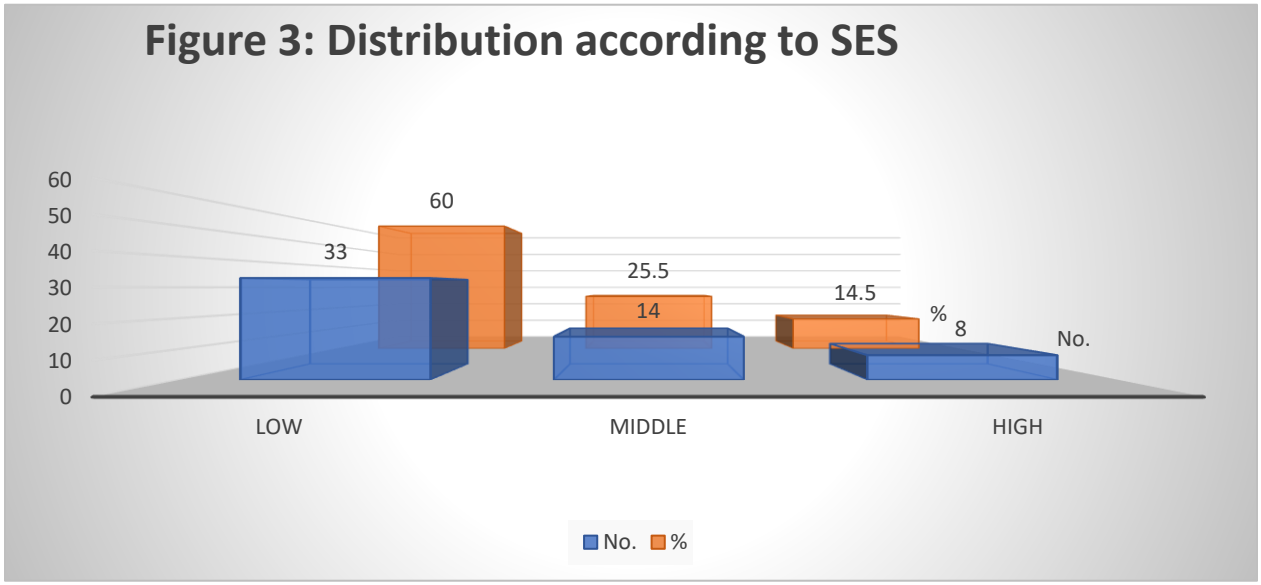


Figure (2):



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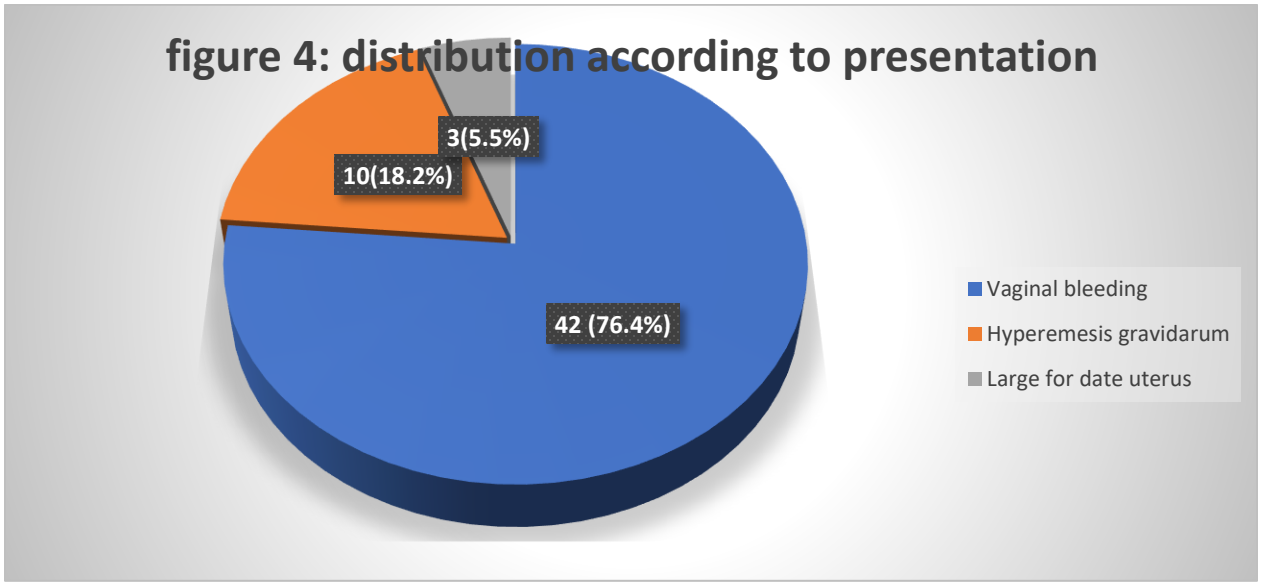

Figure (4):

Table (1): Cases according to their fate

The Fate	No.	%
***Complete Remission After Evacuation Of The Uterus By D&C (Once , Twice)**	**45**	**81.8**
***Persistent Trophoblastic Disease Which Requires Cytotoxic Therapy After Evacuation**	**5**	**9.1**
*** Total Abdominal Hysterectomy**	**2**	**3.6**
*** Lost The Follow Up**	**3**	**5.5**
Total	***55***	***100%***

Discussion: Clinical and Epidemiological Findings of Hydatidiform Mole The biology, diagnosis, treatment, and psychological impact of gestational trophoblastic disease (GTD) make it a crucial area of gynecological and oncology care [(2)]. In our study, the incidence of molar pregnancy was 5.2 per 1,000 pregnancies (1 in 200), consistent with earlier findings by Bruckly J.D. (1984), who reported an incidence of 1 in 221 in Iraq [(31)], and by Dr. Muhsin H. and Dr. Jenan K. (2001), who recorded an incidence of 2.6 per 1,000 pregnancies[(32)]. The higher incidence in our study is likely due to our hospital being a referral center for molar cases and the early detection facilitated by routine ultrasound scans.

Most molar pregnancies occurred in women aged 30-39, contrasting with studies by Palmer JR, Smith HO, and Sebire NJ, which noted higher incidences at the extremes of maternal age [(5,6,8)]. This discrepancy may relate to the increasing parity with age in our study population and the fact that our study was limited to a single hospital

Molar pregnancy was more common in multiparous women, which aligns with findings by Berkowitz RS and Bernstein MR, who suggested that higher parity increases the risk, possibly due to maternal age.[(10)]. Multiparity may raise the recurrence risk of molar pregnancy, particularly in women with prior pregnancies, miscarriages, or molar pregnancies.

We observed a higher incidence in patients with low socioeconomic status, supporting previous research by Sebire NJ and Howie PW. This could be due to poor nutrition and living conditions, especially in rural areas.[(8,9)]

Patients with a history of molar pregnancy or previous abortions also had a higher risk of recurrence, consistent with findings by D. Keith Edmonds and Sahraoui W. This could be linked to advancing maternal age and increased parity. [(2,33)]

The most common presenting symptom was vaginal bleeding, followed by hyperemesis gravidarum and an enlarged uterus, similar to observations by Paradinas FJ, Bagshawe KD, and Amir SM. Vaginal bleeding is often the first symptom that prompts early medical consultation and leads to early ultrasound diagnosis. [(7,14,16)]

In terms of outcomes, 81.8% of patients had complete remission after uterine evacuation, which agrees with findings by Philip Savage and Lisa E. Moore, who reported spontaneous remission in

90% of cases. Early diagnosis, prompt evacuation, and consistent follow-up likely contributed to this result. [2, 30, 34].

Persistent trophoblastic disease occurred in 9.1% of cases, requiring cytotoxic therapy. This is in line with D. Keith Edmond, J.G. Grudzinskas, and Robl, who reported persistent disease in about 20% of cases. Regular post-evacuation monitoring of HCG levels facilitated early diagnosis and referral for chemotherapy. [2, 3, 34, 35]

Hysterectomy was performed in 3.6% of cases, mostly in older women, which matches recommendations by Goldstein DP and Benkiran L., who suggest hysterectomy for women over 40 who have completed their families. This procedure was either elective or performed in cases of uncontrolled hemorrhage. [29, 36]

Finally, three patients were lost to follow-up during the study period.

Conclusion & Recommendations

Molar pregnancy continues to present a significant number of cases in our hospital, making it a condition that requires attention. Early diagnosis through ultrasound remains crucial, especially for patients with a history indicative of molar pregnancy. Approximately 90% of cases are resolved after the first or second evacuation, without the need for additional treatment.

Serial monitoring of β-HCG levels is essential for follow-up to ensure early detection and management of any complications, which can prevent adverse outcomes. Therefore, we recommend that patients with a history suggestive of molar pregnancy undergo early ultrasound screening, followed by serial β-HCG testing until two consecutive negative results are confirmed.

Conflict of Interest: The authors declare that there are no conflicts of interest related to the research, authorship, and/or publication of this article.

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