



## Histological and Anatomical Study of Cluster Pregnancy in Abortion Women at Al-Zahraa Teaching Hospital

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### Abstract

The contemporary revision was accompanied at Al-Zahraa-Teaching -Hospital for Obstetrics. This research comprised a histo-pathological study of women distress from cluster pregnancy in Najaf Governorate, who reviewed the obstetrics department at Al-Zahraa-Teaching-Hospital for the period from 1/9/2017 to 5/2/2018. About (10) of women with cluster pregnancies, (5) cases of complete cluster pregnancies and (5) cases of partial cluster pregnancy. The range age of women with cluster pregnancies ranged from (25-15) y. The consequences of the anatomical and histological revision of women with cluster pregnancy showed that there were two types of cluster pregnancies: full cluster pregnancy and partial cluster pregnancy. Also revealed that the placenta and the fetus looked as a block on the fluid-filled bags analogous to the grape cluster where the size of these bags about (8 \* 8). It was also distinguished that the fetus and placenta were not distinctive in a clear and completely slanted. However the results indicated for women with partial cluster pregnancy that the fetus and a bulky partition of the placenta appeared in the form of a mass container on the bags filled with liquids, which were in the form of irregular clusters similar to the cluster of grapes, where the size of these bags about (5 \* 5). As noted that the fetus completely mutilated or non-existent but a minor portion of the placenta lingered intact and distinctive.

**Keywords:** *Molar pregnancy, Partial molar pregnancy, Abortion woman.*

### Introduction

Molar type of pregnancy is a non-cancerous tumor that progresses in the uterus. It is a public disease in our society. It is not a serious disease that can be treated easily, but it requires a great deal of patient cooperation and understanding of the condition and the resolution of pregnancy again only after nine months [1].

Cluster type pregnancy in woman transpires when the placenta progresses into a group of cysts that resemble to the vesicles and do not advance into a healthy pregnancy containing intact placenta tissue and embryo. These cysts are filled with fluid that can be experiential as grape clusters [2]. There are two types of complete cluster pregnancy and partial cluster pregnancy of woman. In complete cluster pregnancy there are no

placental tissues at all, nor is there a fetus. In contrast, in the partial cluster pregnancy there is about little intact placenta tissue and a completely intact embryo, [3], also cluster pregnancy may be opportunity into a rare category of cancerous tumor and must therefore be urgently addressed [2].

The prevalence of cluster load varies according to geographic distribution, as this is high in South Asia, as in Indonesia, the Philippines and China [4]. The careful follow-up of the cluster pregnancy pathway is important in order to minimize the complications of this problem and to allow for a healthy pregnancy in the future. The doctor must ensure during the operation that all the residues of the cluster pregnancy are removed.

The ganglion cells penetrate the uterine wall and become muscles. And need chemotherapy because only the cleaning of the uterus is not enough and may occur in other cells outside the uterus where it spreads in the body and affects the lungs by (80%) and vagina (30%) and brain by (20%) and liver (10%). Radiotherapy should be done periodically and the pregnancy hormone checked weekly to ensure that the patient responds to treatment until it becomes zero [5].

**Cluster Type of Pregnancy**

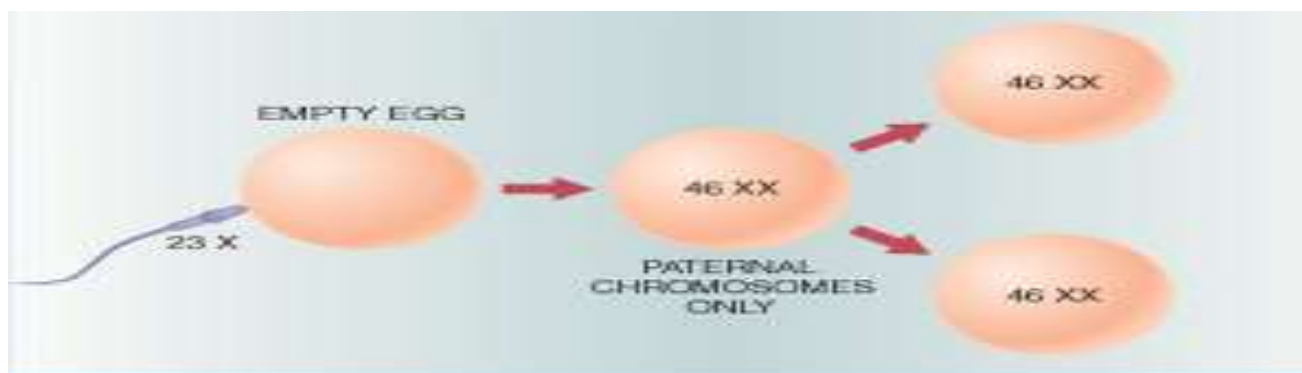
Cluster pregnancy occurs when abnormal tissue is formed after fertilization of the egg rather than the formation of a whole embryo and although not an embryo it is accompanied by complete pregnancy symptoms.

Cluster pregnancy should be eliminated immediately after diagnosis and complete tissue removal because its survival in the woman's body can have serious consequences for its validity.

There are two types of cluster load:

**Type 1: complete molar pregnancy**

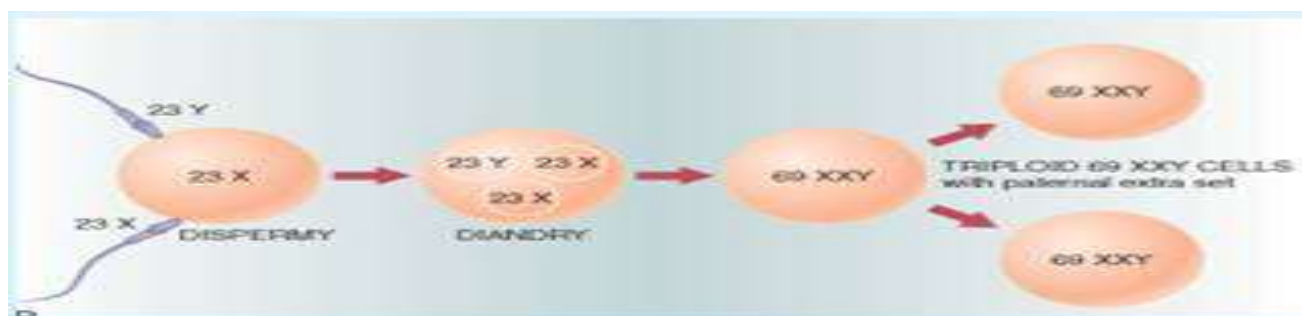
This type occurs when two animals fertilize an empty egg, resulting in a fertilized egg carrying 46 chromosomes of the father (instead of 23 father and 23 of the mother) and because of this imbalance is composed of placenta without a fetus and this type is the most dangerous where the incidence of cancer in between 20% 10) of cases [2].



**Restricted or Partial Molar Pregnancy**

This occurs when the natural egg is fertilized with two sperm cells, resulting in an egg carrying 69 chromosomes. The resulting

embryo and placenta are formed. Because of this deformation, the fetus can die or die at the beginning of pregnancy. The placenta continues to grow. 0.5% (2).



Pregnancy appears in the early stages of cluster pregnancy, as a healthy pregnancy, but then the symptoms of cluster pregnancy begin to appear:

Vaginal bleeding appears in the first trimester of pregnancy and is often dark brown to light red. Severe nausea and vomiting.

Cyst exit, shaped like grapes, sensation of pressure or pain in the pelvic area (6)

During the examination we can observe the following:

- Very rapid inflation in the uterus, that is, the size of the uterus is very large proportion of the size of the uterus should be at this stage of pregnancy.

- High blood pressure.
- Cysts in the ovaries.
- Anemia.
- Hyperthyroidism (6 and 7).

## Materials and Methods

### Patients

Samples were achieved from women with cluster pregnancies at Al-Zahraa-Teaching-Hospital for Obstetrics in Najaf Governorate, who visited the Department of Obstetrics at Al-Zahraa Teaching Hospital for the period from 1/9/2017 to 5/2/2018. The study included follow-up of [10] [5] cases of complete cluster pregnancy and [5] cases of partial cluster pregnancy where the age of women with cluster pregnancies ranged between (25-25) y. after the expansion or closure of the cervix by draw curettage, This procedure is performed under general anesthesia and under the supervision of a physician [8].

### Preparation of Histopathological Section

Afterward installing the specimen with the neutral buffer formalin stabilizer by 10%

The sample is placed in progressive concentrations of ethyl alcohol

- The first concentration is 70% for two hours
- The second concentration is 80% and for two hours also
- The third concentration is 90% and for two hours also
- The fourth concentration is 100% and for two hours also
- The fifth concentration is 100% for two hours also

The sample is placed in these concentrations to get rid of the water in the tissue where the concentrations draw water from the fabric gradually so as not to shrink the sample, and then put the sample in the cellulose for two hours and repeat this process twice for the resolution:

- Remove of the alcohol
- Remove of the impurities
- Training before waxing procedure.

The paraffin wax was then used at temp. 60 ° C by using the oven twice, where wax worked on the strength of the sample. The sample was then removed from the gel by special forceps. The sample was then placed in the wax for paraffin wax for one hour several times. Wax casting device the sample was placed in custom castes and then the molds were left to harden. The sample was then cut into the Microtome device for the purpose of obtaining longitudinal sections with a thickness of 3-5 micrometers. The wax tape was then reassigned to glass slides to be prepared for dyeing process [9].

## Results and Discussion

### Anatomical Consequences

#### Complete Molar Pregnancy

The anatomical results of our present study showed that the embryo and the placenta appeared in a distorted mass of tissue in which the fetus cannot be clearly identified from the net. This mass is similar to the irregular cluster of grapes. These bags are filled with fluid as shown in Fig. 1 and No. 2.



Figure 1: Histopathological section of placenta and embryo of abortion woman



Figure 2: Histopathological section of placenta and embryo of abortion woman

**Partial Molar Pregnancy**

The result in this study indicate the emergence of a mass of tissue and does not include the fully deformed fetus and the placenta remains intact, while part of it

suffers from deformity and destruction merged with the mutilated fetus. The results also show aggregates of bags in the form Irregular and free of liquids as shown in Figure (3).



Figure 3: Histopathological section of placenta and embryo of abortion woman

**Histopathological Results**

**Complete Molar Pregnancy**

The results of our study indicate the emergence of a mass of tissue completely

destroyed and the inability to distinguish the tissue of the fetus and placenta from each other, and deformity of both fetus and placenta and this block contains 8 \* 8 bags as shown in Figure (4, 5).



Figure 4: Histopathological section of complete molar pregnancy before diagnosis under compound microscope

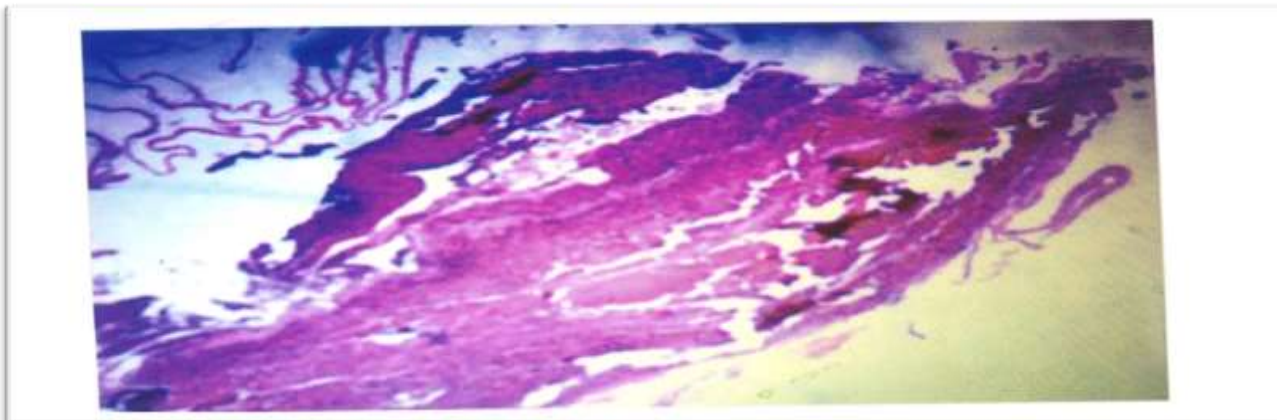


Figure 5: Histopathological section of placenta and embryo of complete molar pregnancy (H& E 400X)

### Partial Molar Pregnancy

The results of our study indicate that tissue destruction of the placenta is partially

deformed and the fetal tissue is completely deformed.



Figure 6: Histopathological section of Partial molar pregnancy before diagnosis under microscope

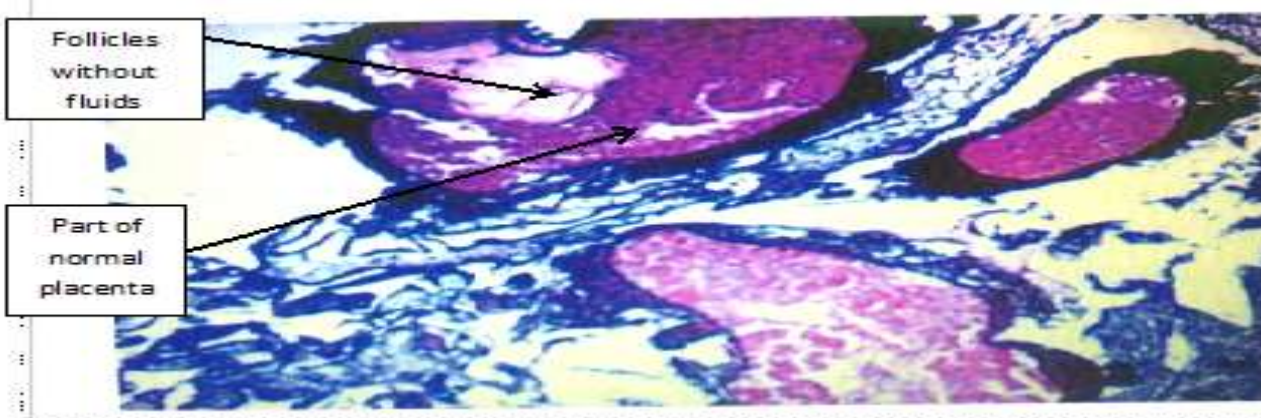


Figure 7: Histopathological section of placenta and embryo of partial molar pregnancy (H& E 400X)

### Discussion

The anatomical and histological conclusions in our current study revealed that there are two types of cluster pregnancy Are complete cluster pregnancies and partial cluster pregnancies. This result is consistent with the results of several studies (2017) Torbati and Biman *et al* (2017) [10]. The outcomes of our research showed that in full cluster pregnancy both the embryo and the placenta

perform in a mass of tissue, which cannot be well-known from both the embryo and the placenta. The mass of the tissue furthermore includes clusters of bags that resemble grape clusters. The size of these bags is 8/8 and is filled This may be due to deformation of both the embryo and the placenta so that they cannot be illustrious from each other because this species occurs because two mammalian animals fertilize an empty egg, leading to a completely deformed embryo and partially

deformed placenta. As a result, the fetus will not be able to continue to grow. The placenta continues to grow. The nonstandard circumstance and this pregnancy can turn into a cancerous tumor (0.5%) [8]. Complete cluster pregnancy is more dangerous than other type of partial cluster pregnancies because the bags in the complete cluster load tissue are larger than the size of the bags in

the partial cluster pregnancy. It was residues intact in the placenta and the tissue cells do not easily penetrate the uterine wall and abdomen compared to the full cluster load. Where in the placenta and fetus are completely mutated, causing easy penetration of the entire ganglionic cells of the uterus and its lining [3].

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