



THE STRIDDLING TRANSFIGURATION AND CLINICOPATHOLOGICAL EXAMINATION OF PRODUCTS OF CONCEPTION AFTER FIRST TRIMESTER MISCARRIAGES-TWO YEAR STUDY IN A TERTIARY CARE CENTRE IN NORTH EASTERN PART OF THE COUNTRY.

Pathology

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ABSTRACT

Introduction and Aim: Miscarriage represents a common problem that occurs in the first trimester of pregnancy. There is no general agreement on the value of submitting tissues from uterine evacuation in cases of miscarriage for histopathological examination.

This study aimed to evaluate the role of histopathological examination in cases of first-trimester miscarriage and evaluate the clinical and histopathological findings relating to surgical uterine evacuation in first trimester miscarriages.

Methods: The Study was done in military hospital Shillong retrospectively from October 2015 to march 2018, in which total of 275 tissue samples were studied, obtained via surgical uterine evacuation in patients who were having a history of conception up to 12 month period with the clinical data including age, parity, gestational age, clinical diagnosis, and other relevant information were collected.

Results: Incomplete miscarriage was the commonest type of miscarriage and constituted 65.3% (179) of the studied group and surgical evacuation was the most common method of termination. The histopathology reports confirmed the pregnancy in all patients and revealed retained product of normal pregnancy in 238 (86.54%) cases, partial mole in 5 (1.82%) patients, complete hydatidiform mole in one (0.36%) case, decidual reaction/Arias stella reaction in 21 (7.64%) cases and no product of conception in 10 (3.64%) cases.

Conclusion: Clinical and Histopathological examination of the products of conception is an important method in detecting undiagnosed molar pregnancy that needs special follow-up, further resective measures and management.

KEYWORDS

First trimester, Miscarriage, clinical, Histopathology

Introduction: Early pregnancy failure and bleeding are common problems occurring in the first trimester of pregnancy. Histopathological examination of products of conception is a routine component of the management of patients with early pregnancy failure.^{1,2}

Miscarriage is not so uncommon first-trimester conditions encountered by obstetricians and gynecologists. Approximately 10–20% of clinical pregnancies are lost spontaneously during the first trimester³, which is defined as the first 12–14 weeks of gestation⁴. Most of the women who had spontaneous miscarriage have undergone surgical uterine evacuation of retained products of conception (RPOC). The main reasons for doing a routine histopathological examination for the product of conception are, to prove the presence of an intrauterine gestation and to exclude undiagnosed gestational trophoblastic disease in the form of partial or complete hydatidiform mole study is to determine whether histopathological examination of tissues obtained from first-trimester miscarriage is of any clinical value. In most centres, it is a routine practice to submit tissues obtained by uterine evacuation for histopathologic examination to confirm the presence of intrauterine fetal tissue, there is little agreement about the value of this practice. The main rationale is to detect an ectopic pregnancy, which requires immediate further management, or a molar pregnancy, which necessitates special follow-up. Other reasons include detecting surgical complications, such as incomplete or failed pregnancy evacuation; determining the cause of recurrent pregnancy loss; or detecting unexpected fetal pathology.⁵

Methods: In this descriptive observational study, 275 biopsies from patients admitted to Military Hospital Shillong, from October 2015 to March 2018, with the diagnosis of first-trimester (5–12 weeks) abortions were examined. The clinical data including age, parity, gestational age, clinical diagnosis, the method of evacuation, and other relevant information were collected and submitted for histopathologic examination. The samples were placed in 10% buffered formaldehyde and sent to the histopathology laboratory. The samples were undergoing gross examination before being embedded in paraffin blocks for further processing. The paraffin blocks were cut by a microtome into 4 mm sections and then stained with hematoxylin and eosin. The sections were examined microscopically by the same histopathologist who performed the gross examination. Two blocks were examined for each patient, and additional blocks were sometimes required to detect chorionic villi. During the microscopical examination, detecting fetal tissues, chorionic villi and trophoblasts confirm the intrauterine pregnancy in addition to other tissues, such as deciduas or secretory endometrium. Presence of deciduas with and

Arias-Stella reaction suggest early intrauterine pregnancy, but this did not exclude the possibility of an ectopic pregnancy. Each report included a note about the absence or presence of trophoblastic diseases, such as molar pregnancy and the absence or presence of a malignant trophoblastic neoplasm. Analysis of data was done by the statistical package for the social sciences (version) computer software aided by Excel. A descriptive approach including frequency, percent, range, mean and S.D was done for the variables.

RESULTS: During the period of this study, 275 biopsies of patients who were admitted to Military Hospital with the diagnosis of first-trimester miscarriage together with cases of spontaneous miscarriage admitted for emergency uterine evacuation were examined. Their mean age \pm SD was 27.4 ± 7.5 years, (range: 18–42 years) and mean parity \pm SD was 4.2 ± 3.2 , (range: 0–7). The clinical diagnosis on admission was incomplete miscarriage in 179 (65.09%) patients, missed type in 72 (26.18%) patients, blighted ovum in 17 (6.18%) patients, and complete miscarriage in 7 (2.55%) patients. In all uterine evacuation was done except for cases of complete miscarriage which was confirmed depending on clinical and ultrasound examinations; these women underwent no intervention as shown in Table 1. Uterine evacuation was performed in 244 (88.9%) patients. In all except one, the method of evacuation was surgical, Table 3, either as a sole procedure or by misoprostol 800 g vaginally. The remaining patient underwent only medical evacuation of products of conception. The histopathological results of 275 specimens, were as follows: retained product of normal pregnancy in 238 (86.54%) cases, partial mole in 5 (1.82%) patients, complete hydatidiform mole in one (0.36%) case, decidual reaction/Arias stella reaction in 21 (7.64%) cases and no product of conception in 10 (3.64%) cases as shown in Table 2.

Table 1: Types of abortion.

Types of abortion	Number	Percentage
Incomplete	179	65.09%
Missed	72	26.18%
Blighted ovum	17	06.18%
Complete	7	02.55%
Total	275	100

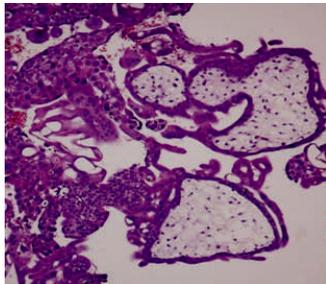
Table 2: Histopathology report diagnosis.

Histopathological diagnosis	Number	percentage
Products of conception	238	86.54%
Partial mole	5	1.82%

Complete mole	1	0.36%
No products of conception	10	3.64%
Decidual reaction/arias stella reaction	21	7.64%
Total	275	100

Table 3: Method of pregnancy termination.

Method of termination	Number	percentage
Surgical	244	88.7%
Medical	1	0.12%
No intervention spontaneous	30	10.1%
Total	275	100%

**Fig 1 product of conception(H&E)**

DISCUSSION: Miscarriage is a common condition in the first trimester of pregnancy, and like many other disorders, the accurate diagnosis is unnecessary for the management but in some cases, it may be misdiagnosed when another condition that requires immediate treatment or long-term follow up, as an ectopic pregnancy or gestational trophoblastic disease exists.⁶ Many diagnostic tools were used to determine the type of miscarriage and to differentiate it from other conditions such as ultrasound, quantitative beta-human chorionic gonadotropin (beta-hCG) testing, and histopathologic examination of the uterine products.⁷ The tissue which passed by a spontaneous miscarriage or removed during the uterine evacuation is important to undergo histopathologic examination for detecting unsuspected conditions like molar or ectopic pregnancy and diagnosing surgical complications like the incomplete evacuation of the uterus.⁸ Histopathologic examination of the tissue passed by a spontaneous miscarriage or removed during uterine evacuation is common, aimed at detecting unsuspected conditions (e.g., molar or ectopic pregnancy) and diagnosing surgical complications (e.g., incomplete or failed pregnancy evacuation). The practice of routine histopathologic evaluation of tissue obtained at the time of miscarriage has been the subject of debate. Some authorities⁷⁻¹⁵ suggest that a sample of tissue from all uterine evacuations (either spontaneous or Surgical / medical) be submitted for histological examination to exclude an ectopic pregnancy or gestational trophoblastic diseases, to investigate whether the miscarriage was due to disruptive causes, and sometimes to affirmatively confirm that pregnancy had occurred. There is controversy regarding the practice of routine histopathologic examination of tissue removed during the miscarriage^{2,3,5,7,8,16,17} suggest that a sample of tissue from all uterine evacuations (either spontaneous or surgical/medical) should be submitted for histopathological assessment: first to confirm the pregnancy, second to exclude an ectopic pregnancy or gestational trophoblastic diseases and third to search for the causes of miscarriage. In Asia, the incidence of hydatidiform mole is as high as 1 in 80 pregnancies, whereas in the western world, it is 1 in 500–1500 pregnancies.⁹⁻¹¹ The incidence of hydatidiform mole in our Hospital is 1 in 275 pregnancies which is comparable to the incidence.

CONCLUSION: Concluding the findings of this study, histopathological assessment of the products of conception proved to be an important tool in detecting undiagnosed molar pregnancy that needs special follow-up and further management. Considering the findings of our study, the cost of histopathological examinations, and the low incidence of molar pregnancies in our hospital, we can say it may not appear reasonable to perform these examinations routinely after all first-trimester miscarriage. We recommend that histopathological examination be performed in select instances: when the diagnosis is uncertain preoperatively, when fewer tissues than expected have been obtained, when ultrasound suggests a molar pregnancy, when patients are considered of high risk for trophoblastic disease, or when inspection during surgery suggests unexpected pathology.

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