Routine Histology of Evacuated POC: Necessity or Ritual?

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We being health care providers are accustomed to many routine practices without assessing their importance. Tissue from evacuation of product of conception is studied histologically as per routine. Of 1320 women studied; 92.79% confirmed POC; 7.8% showed decidua; 0.22% (05) had molar changes, well recognized before evacuation; and 03 (0.14%) were reported as partial mole. There did not appear to be any benefit from the routine histological examination.

Key words: Histology, product of conception

It is a routine practice to send tissue for histopathological evaluation obtained at termination of early pregnancy or after evacuation of spontaneous miscarriage.

The validity of this *routine* is now being questioned the worldover. One school of thought is to investigate those women in whom pre-operative diagnosis is uncertain or tissue obtained at operation is of doubtful nature. Fewer studies had been conducted for settling this emerging controversy. This study was retrospectively conducted in Lady Aitchison Hospital, Lahore. The objective was to evaluate the importance of routine histological examination of the tissue obtained after surgical termination of early pregnancy or following emergency evacuation of failed conception. .

Methods:
All cases of failed pregnancies were analyzed from Jan; 1999; to July; 00; which ended up in surgical evacuation because of missed abortion, incomplete miscarriage, retained product of conception (POC) after spontaneous abortion etc. A selected sample of tissue was collected by surgeons and then sent for histological examination at the end of procedure. Pre-operative ultrasound examination was performed in all cases except where diagnosis of incomplete abortion was obvious clinically. Procedure involved in termination of pregnancy was dilatation of cervix under general anaesthesia followed by removal of POC by Sponge Holding Forceps (suction curettage in case of molar gestation) and then sharp curettage. Tissue samples were collected in a 10% solution of Formaldehyde, labeled and sent to the Pathology department of King Edward Medical College, Lahore. Each specimen was accompanied by a proforma which had salient features of the clinical history and operative findings. Each was examined by consultant pathologist; who noted the gross appearance of the specimen before further processing it for microscopic examination. Specimen were cut and stained with Eosin and Hematoxylin and same pathologist examined the stained sections. An intrauterine pregnancy was confirmed if fetal tissue, trophoblast or chorionic villi were identified in other tissue such as decidua and secretary endometrium. A recent pregnancy was suggested by the presence of decidua or the identification of Arias-Stella reaction, but this did not exclude the presence of ectopic pregnancy. A conclusion was drawn for each report about the presence or absence of trophoblastic disease(molar pregnancy), any malignant cells according to currently accepted criteria. To ensure complete analysis of this study, all the case records were compared with the admission registers of outpatient department and maintenance registers of the operation-theatre.

Results
One thousand three hundred and twenty women were included in this analysis; including 870(65.9%) who underwent surgical termination and 450(34.09%) had emergency evacuation of retained product of conception. The mean age of women undergoing surgical termination was 23.6(5.5SD) years and for surgical evacuation group 25.4 (3.6SD) years; for evacuation after incomplete miscarriage was 26.7(3.8SD) years; and for re-evacuation after early termination was 24.6(2.8SD). The mean gestational age was 10.6(1.3SD) weeks for surgical termination; 9.8(2.1SD) weeks for emergency evacuation; 12.2(1.3SD) weeks for spontaneous miscarriage; and 8.7(2.5SD) weeks for re-evacuation after early termination. About 87% gestations were confirmed by a combination of calculation of gestational age; tests for pregnancy; physical examination and ultrasound examination. Rests of the pregnancies were best estimated by combination of above 2-3 methods.

For 870 surgical terminations; the histological specimen collected confirmed product of conception in 823(94.5%) cases. In 35(4.02%) only decidua and 8(0.9%) secretary edometrium was confirmed by pathologist whereas 4(0.4%) were reported as blood clots. Four hundred and fifty emergency evacuations for incomplete miscarriages (n=293); missed abortion (n=101); repeat evacuation (n=56) were performed and of repeat procedures six were septic cases; 25 followed an early evacuation other 25 after evacuation of spontaneous miscarriages.

For 450 emergency evacuation in 401(89.1%) specimens product of conception were confirmed histologically; in 39(8.66%) women only decidua was

reported; 5(1.11%) showed molar changes [2-complete & 3(0.66%) partial] confirming the pre-operative findings of ultrasound examination; and other five specimen revealed blood clots only.

In six women molar changes of placentae were reported by ultrasound examination pre-operatively which could not be confirmed histologically. Two other women were suspected as chronic ectopic pregnancies by ultrasonography but evacuation was performed on clinical grounds and histology confirmed product of conception. Histological repots of decidua were found in 74 (5.6%) women; frequency was 35(4.02%) after surgical termination and 39(8.6%) following emergency evacuation and it was independent of gestational age. One patient was clinically diagnosed as ectopic pregnancy one week after evacuation and managed surgically without any complication

Discussion

In 92.7% cases the histological examination from the uterine curettage of early pregnancy confirmed product of conception. While remaining 7.8% were inconclusive. Post-operative complications were almost nil except negligible symptoms that were managed by reassuring. It is surprising that tissue identified as POC by surgeons was nearly as accurate as histological report. Such reporting casts > 600 Rs; (minimum) without giving any added benefits to the patient's convalescence. However the results this study strongly question the importance of routine histology of the product of conception and suggest that this routine should not be practiced anymore; especially when compared with 188 cases (though small sample) where tissue could not be sent for histology, termination of their pregnancies was satisfactorily accomplished, without reporting any complication.

Out of 5 women in whom molar pregnancy was suspected by ultrasound examination; only 3 cases were diagnosed as partial mole histologically. Post-operative follow-up discrimination on the basis of partial or complete mole has become controversial[1]. So it remains unclear whether patients are benefited from such reports.

Ectopic pregnancy has become a major cause of maternal morbidity and mortality all over the world[2]. For diagnosing early ectopic pregnancy much reliance on ultrasonography is not prodent. It needs good clinical acumen and proper interpretation of certain biochemical tests. In this study the women who presented as ectopic after evacuation could not have benefited from the histological report.

The arguments for sending tissue at termination of pregnancy for histology is; to confirm pre-operative findings; to identify unsuspected pathology; and to assure complete pregnancy termination. This study suggests that histology does not correct or confirm pre-operative diagnosis. As for as post-operative management is concerned, it too is not altered by histology. Out of 1320 cases; 5(0.22%) women with molar pregnancy, who were reliably diagnosed by ultrasound examination, do not mandate histological evaluation in every case. On such basis it can not be recommended to submit tissue from every termination or evacuation after spontaneous miscarriage for histology. It is more important to train gynecological surgeons for adequate pre- and post-operative skills of diagnosis. However histological examination seems rational in women with uncertain diagnosis; when suspicious tissue is obtained at curettage; or trophoblastic tissue is not readily recognised. By adopting rational attitudes in our traditional practices; one can save time; capital and probably can attain overall women welfare

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References

1. Jauniaux E, Kodri P et al: Partial role and triploidy screening patients with first-trimester abortion. Obstet Gynecol 1996; 88: 616-619.
2. Stovall TG, Kellerman AL et al: Emergency department diagnosis of ectopic pregnancy. Ann Emerg Med 1990; 19: 1098.