Post-mortem diagnosis of Gestation Choriocarcinoma – A Case Report

*Dr. B. Suresh Kumar Shetty, **Dr. Flora Lobo, ***Dr. Harindar, ****Dr Mahabalesh Shetty, *****Dr. Geetanjali, ******Dr. Anjali, *******Dr. Preetham, S.

Assistant Professor, Dept. of Forensic Medicine, Kasturba Medical College, Mangalore
**Post Graduate student in Pathology, Kasturba Medical College, Mangalore.
***Associate Professor, Dept. of Pathology, Kasturba Medical College, Mangalore
****Associate Professor, Dept. of Forensic Medicine, K.S. Hegde Medical College, Derlakatte, Mangalore
*****Professor, Dept. of Obstetrics & Gynecology, Kasturba Medical College, Mangalore
******Post Graduate student in Obstetrics & Gynecology, Kasturba Medical College, Mangalore
*******Post Graduate student in Orthopaedics, Kasturba Medical College, Mangalore

Address for correspondence:
Dr. B. Suresh Kumar Shetty
Assistant Professor, Dept. of Forensic Medicine.
Kasturba Medical College, Mangalore
Tel: +91 9886092392, Fax: +91 824 2428183
E-mail: bellisks@rediffmail.com

Abstract

The present case demonstrates how a clinico-pathological approach of a forensic pathologist played a key role in deciding a sudden suspicious death and also highlights the characteristics of gestational choriocarcinoma and its importance's in post mortem diagnosis among the forensic experts and clinicians. Investigating authorities were curious in knowing whether the death was due to criminal abortion or suicidal consumption of poisoning. The case was unraveled so that the rested soul is given justice and free from all defames.

Key Words: Gestation Choriocarcinoma, Autopsy, ileal and Liver metastasis, Histopathology.

1. Introduction:

Gestational trophoblastic disease also called as choriocarcinoma is a malignant trophoblastic tumour arising from any gestational event during pregnancy in the reproductive age group. It is a quick growing form of cancer that occurs in a woman's uterus after a pregnancy, miscarriage, or abortion which usually metastasize to other places in the body. Women with gestational choriocarcinoma may present with abnormal vaginal bleeding, persistent markedly elevated βhCG, or a history of prior pregnancy. Most patients develop gestational choriocarcinoma shortly after gestational anomalies, but pathology may occur after a long latency of years.

In this paper, we report a case of gestational choriocarcinoma diagnosed at Autopsy.

2. Case Report:

A 19 year old girl of an Indian origin with low socio-economic status succumbed sudden and suspiciously. The case was referred from a peripheral hospital with complaints of fever, pain abdomen of two weeks and vaginal discharge of one week. There was no history of amenorrhea but the previous cycles were irregular. The treating doctors suspected either criminal abortion, a common entity in rural India and suicidal consumption of poison to avoid social stigma. A diagnostic ultrasound was conducted and revealed feature of missed abortion for which Dilatation and curettage (D&C) was done. The treating doctors however ruled out criminal abortion clinically were still unsure about consumption of poison. During admission she was pallor, jaundiced and her condition was critical with increased pain. Abdominal examination was tensed with tender haematomegaly. On auscultation the bowel sounds were poorly heard. Abdomen radiographs was conducted and showed dilated bowel loops, ground glass appearance with air fluid level.

As an emergency measure, laprotomy was performed for bilateral twisted ovarian cyst. For surprise intra-operatively illoececal intussception with multiple boggy bleeding swellings in the liver were diagnosed on the operative table. As a surgical treatment bilateral salpingo oopherectomy, ileal resection and anastomosis were done. The patient died after few hours of operation.

In view of a suspicion of foul play due to an unusual nature of her death, a postmortem examination was conducted at the District Wenlock Hospital, Mangalore, to shed light mainly to rule out criminal abortion, suicidal poisoning or any other medical or surgical cause of death.
On External findings the body was of an adult female moderately built and nourished, dark complexion measuring 145cms and weighs 35kgs. Sclera shows yellowish discoulour and breast showed pigmentation of areola bilaterally with surgical wounds on abdomen.

The Internal Findings were Right and left Lungs weighed 300gms and 200gms respectively, congested, froth oozing on cut section. Heart weighs 280 gms with sub-endocardial hemorrhage, coronaries were patent. Abdomen contained 300ml of blood and 40gms of blood clots seen in peritoneum, two surgical swabs were seen in the cavity to arrest the bleeding sites from the surface of liver. Small Intestine showed surgical anastamosis. Large Intestine contains melena and fecal matter. Liver weighed 2170gms enlarged with hemorrhagic swellings all over the surfaces and in tissue parenchyma (Fig.1).

The cut section shows blood clots with tissue destruction in hepatic parenchyma. Spleen weighed 80gms, soft with focal lesions on cut section. Right and Left Kidney each weighed 80gms and the cut section is pale cortex. Uterus weighs 140 gms, measures 9.5x5x2.5cms, tubes ligated on both sides cut sections were hemorrhagic with blood clots and remnants of ovaries. Still unclear with the cause of death, specimens from the tissues were sent for histopathological and toxicological review. Toxicological analysis for known causes of poisons and drugs showed negative. Pathological gross examinations of tissue specimens were done. Ressected Intestinal segment (Fig.2)

Fig-1, Cut section of ovarian cysts and ileal metastasis

in its luminal aspect showed a hemorrhagic polypoidal mass measuring 5X2 cms, cut surface of polypoidal mass was hemorrhagic brown with some white yellow areas. Liver measured 26X14X5 cms with capsule intact with dark red multiple hemorrhagic spots with partly nodular appearance. Cut surface of liver showed large necrotic foci of extensive hemorrhage. Spleen measured 12X4X2 cms, outer surface showed area of discoloration and cut surface showed white wedge shaped area. Uterus without adnexa weighed 140gms and measured 9.5X5X2.5 cms, endometrial cavity showed hemorrhagic surface. Fundus of uterus showed a brown hemorrhagic defect measuring 1.5 cms.

Histological studies showed liver and polypoidal mass of ileum with large aggregates and bilaminar pattern of cytotrophobasts and syncytotrophoblasts amidst extensive hemorrhage (Fig.3 & Fig.4).

Fig. 3 Metastatic Choriocarcinoma in the wall of ileum [H & E stain Original Magnification X 40]
No chorionic villi were seen. Uterine fundus revealed large focus of ischemic necrosis up to serosa. Endometrium and myometrium had areas of hemorrhage. Uterine specimen also showed an occasional syncytiotrophoblastic tumor cells amidst red cells. Bilateral ovarian masses revealed multiple theca lutein cysts with areas of inflammation and hemorrhage. Spleen showed ischemic necrosis with wedge shaped infarction. The Microscopic findings were suggestive of Choriocarcinoma of Uterus with secondary metastasis in liver, small bowel and spleen, a natural cause of death, which unraveled the cause of death.

3. Discussion:
Choriocarcinoma is the most aggressive form of gestation trophoblastic disease, which mostly occurs following a complete hydatiform mole, 1-2% of complete moles are followed by choriocarcinoma [1]. Villi are characteristically absent [1, 2]. In cases of untreated Choriocarcinoma it is characteised by the presence of early haematogenous metastasis to lung, brain liver, kidney and bowel [1,3,4,5] being the most common sites, which is an exception in this case as there was only involvement of liver, kidney, spleen, ileum and burnt out lesion in the uterus. Microscopically tumor is composed of clusters of cytotrophoblasts separated by streaming masses of syncytiotrophoblasts resulting in a characterstic dimorphic plexiform pattern. Hemorrhage and necrosis are usually present [1, 6]. The presence of residual tumour in the uterus of patient dying of disseminated choriocarcinoma may be inconspicuous or altogether absent [1, 7] as in our case we found tumour cells in uterine scrapings as evidence of primary tumour. A natural history of an untreated choriocarcinoma is characterized by development of early hematogenous metastasis as seen in developing countries like ours were the patient with low economic background rarely go for regular checkups. The morphological changes seen in other organs in patients with choriocarcinoma are the result of increased secretion of β-hCG and other hormones by the tumour cells like hyperplasia of endocrinal glands, decidual reaction, Arias-stella phenomenon, bilateral enlargement of ovaries by theca luteal cysts and hyperplasia of mammary lobules. Detection of ovarian theca-lutein cysts long after a case of choriocarcinoma has been treated is usually a sign of persistent disease [1,7] but In this case bilateral enlargement of ovaries by theca luteal cysts and hyperplasia of mammary lobules and pigmentation around areola is seen however increased β-hCG levels were not detected.

4. Conclusion:
As illustrated in our case, the patient can succumb of Choriocarcinoma, as a sudden natural cause of death. Forensic pathologists should be aware of such an evolution. With an appropriate history and Clinico-pathological review such entities can be considered in cases of sudden death.

References: