



DEATH DUE TO RUPTURED LEFT TUBAL GESTATION: AN AUTOPSY CASE REPORT

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ABSTRACT

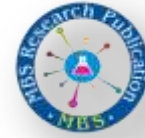
Tubal gestation can be complicated with rupture and in some instances lead to death, especially in cases with coexisting psychosocial health factors as was seen in the index case. We report a case of a twenty-five (25) year old lady with her last menstrual period occurring ten (10) weeks prior to sudden onset of severe lower abdominal pain which made her immediately proceed to an unapproved medical centre been managed by an unlicensed drug dispenser for medications for a period of two (2) days. On the second day, she was advised by her friends to seek proper medical attention elsewhere and she opted for a Government owned Hospital located two hundred (200) metres away from her residence when compared to the unapproved medical centre she was initially receiving medications in. She arrived the emergency unit of the Government owned Hospital by an ambulance and on examination she was afebrile, conscious and severely pale. She died prior to the onset of the surgery and few minutes after admission. The autopsy examination showed corpus luteum of pregnancy, ruptured left tubal gestation, massive hemoperitoneum and acute tubular necrosis. The cause of death is massive hemoperitoneum secondary to ruptured left tubal gestation.

Keywords: Autopsy; Psychosocial health factors; Ruptured left tubal gestation; Unapproved medical centre; Unlicensed local drug dispenser

CASE REPORT

A twenty five (25) year-old female undergraduate, who was admitted into the emergency unit of a government owned tertiary Hospital in Rivers State, Nigeria with complaints of severe lower abdominal pains of two (2) days duration. Her last menstrual period occurred ten (10) weeks prior to onset of abdominal pains and it made her proceed immediately to seek for medical attention in an unapproved medical Centre owned by an unlicensed drug dispenser. Despite receiving intravenous fluid, intramuscular analgesic and intramuscular antimalarial drugs during her stay there, her clinically condition was deteriorating and on the second day she was advised by her friends to seek for better health care elsewhere and her choice was a government owned tertiary hospital located less than two hundred (200) metres and closer to her residence when compared to the unauthorized medical centre she had previously been receiving medications in. She came into the emergency unit of the government owned tertiary hospital in an ambulance, and conscious.

On clinical examination she was conscious, dehydrated, severely pale, afebrile, anicteric and she



had no pedal oedema. Her pulse rate was one hundred and twenty (120) beats per minute (RV: 60-100bpm) and her blood pressure was 100/60mmHg. She had a generalized tender abdominal and her vulva and vagina appeared normal. Her cervix displayed a positive cervical excitation tenderness.

A laboratory work-up disclosed packed cell volume of sixteen (16) percent (RV: 30-47 percent), a seronegative Human Immuno Deficiency virus 1 and 2

status, a seronegative hepatitis B surface antigen and a positive pregnancy test.

She was prepared for emergency exploratory laparotomy due to ruptured ectopic pregnancy and she was certified dead ten (10) minutes after admission and despite efforts at resuscitation. Her body was sent to the morgue for autopsy.

AUTOPSY FINDINGS

The corpse weighed 50kg and measured 160cm in length, the body mass index is 19.53 and during the external examination she is severely pale and with multiple venipuncture marks in both the right and left cubital fossae. The internal examination revealed no pneumothorax and all the internal organs are located in their normal anatomical location. The pericardial cavity, the right and left pleural cavities appear normal. The peritoneal cavity contains blood measuring 3.2litres.

The right and the left ovaries weigh 9.5gm each (RV: 8-10gm respectively). Their cut surfaces revealed yellowish spherical masses bilaterally (corpus luteum of pregnancy). The right fallopian tube measures 8.5cm long and the cut surface is normal. The left fallopian tube measures 9cm long and appear normal except in the area of rupture which is located in the ampulla and 3.5cm from the cornu (see figure 1).



Figure 1: Gross examination of the left fallopian tube showing an area of rupture

The cut section of the left fallopian tube appear normal except in the area of rupture which is grayish-white, brown to tan coloured and friable in some areas. The uterus measure weigh 41gm (RV: is 33-41gm). The cut surface of the uterus show no lesion. The uterine cavity, endometrium and myometrium is normal. The uterine cervix, vagina and vulva is normal. The



right and left renal capsules strip easily and revealed a pale and smooth cortical surface. The right and left kidneys weigh 120gm each (RV: is 120-160gm respectively). Their cut surfaces are similar and show cortical pallor and a congested and dark medulla (see figure 2).



figure 2: Gross examination of the right kidney (a) and left kidney (b) showing a congested medulla (arrow) and a pale cortex (arrow head)

The ureters are normal and empty into the bladder trigone bilaterally. The bladder is empty and the mucosa is normal. Other organs appear normal.

Her histology of the left fallopian tube revealed a ruptured wall and chorionic villi of varying sizes within the wall and areas of hemorrhage and necrosis of the wall (see figure 3).

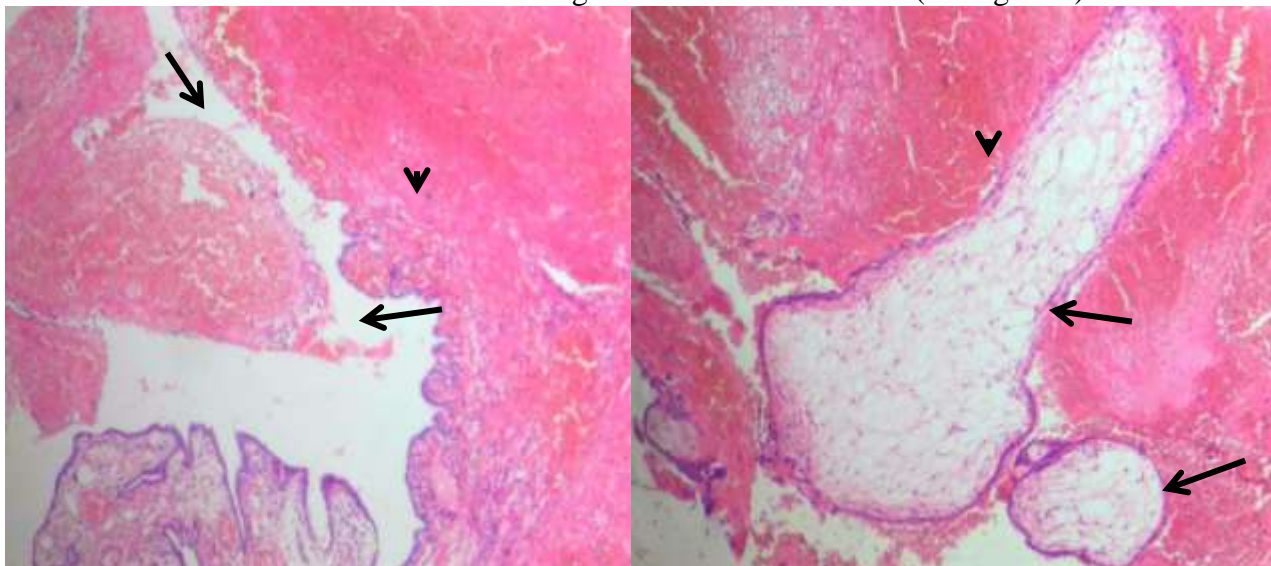


figure 3: Photomicrography of the left fallopian tube. (A) showing area of rupture (arrow) and hemorrhagic necrosis of the wall (arrow head) (H&E, 400x); B-High magnification of other



areas of the left fallopian tube showing varying sized chorionic villi within the wall (arrow) and areas hemorrhagic necrosis (arrow head)(H&E, 400x).

These features are consistent with ruptured left tubal gestation. The right fallopian tube showed a normal histology. The histology of the right and left kidneys were similar and revealed patchy areas of necrosis of the tubular epithelial cells and eosinophilic cast in some of the tubules. The glomeruli, interstitium and vessels appeared normal. These features in the right and left kidney are consistent with acute tubular necrosis. The histology of the right and left ovaries were similar and revealed enlarged corpus luteum. There are zones of condensed stroma tissue and areas of hemorrhage surrounding the corpus luteum, these features are consistent with corpus luteum of pregnancy. The histology of the uterus revealed the endometrium displaying decidual changes in stromal cells. There is no chorionic villi in the uterus and the myometrium showed a normal morphology. The histology of other organs revealed a normal morphology.

The findings of the autopsy points towards massive hemoperitoneum as the immediate cause of death and it is due to ruptured left tubal gestation.

DISCUSSION

Tubal gestation occurs when the fertilized egg implants in the fallopian tube. It is the commonest type of ectopic gestation. In Rivers State University Teaching Hospital Port Harcourt, Rivers State, ectopic gestation occurs one (1) out of forty seven (47) deliveries.¹ The incidence of ectopic gestation across other cities in Nigeria is quite similar to Port Harcourt. However the incidence of ectopic gestation in South Korea, Jamaica and Ghana is one (1) in twenty one (21) deliveries, one (1) in twenty eight (28) deliveries and one (1) in thirty (30) to forty three (43) deliveries respectively.²

The commonest location of tubal gestation is the ampulla of the fallopian tube^{1,3} and this is consistent with the index case. She presented with amenorrhea and abdominal pains which is consistent with the commonest symptoms patients with tubal gestation usually present with. Ectopic gestation occurring in the ampulla of the fallopian tube commonly rupture between eight (8) to twelve (12) weeks^{4,5} and this is consistent with the index case. This case is an example of left tubal gestation. Dow et al (1975) reported no significant difference between the incidence of right tubal gestation and left tubal gestation. However few cases of bilateral tubal gestation have been reported.⁵ The complications of tubal gestation seen in this case is rupture and its sequelae. Studies conducted in Ghana have shown that tubal rupture is (89.6%) commoner than tubal abortion (10.4%).⁶ In Makurdi, Nigeria the incidence of ruptured tubal pregnancy is 0.87% of total births (1 in 114 deliveries).⁷

Tubal gestation occurs due cessation of myoelectrical activity in certain parts of the fallopian tube resulting to absence of tubal motility in that part. The fertilized ovum remains there and trophoblast develops invading deeply into the tubal wall.^{8,9} The fallopian tube wall is thin and the tubal lumen is inadequate to meet trophoblast development requirement. When bleeding occurs at the site of implantation due to invasion of tubal wall by trophoblast. Tissues of the tubal wall form a gestation sac for the growing ovum and hemorrhage may occur in the tubal



lumen or may occur into the layers of the broad ligament or into the peritoneal cavity^{10,11} as seen in this case.

The mechanism of death in the index case is hypovolemic shock. Ruptured tubal gestations is a leading cause of maternal mortality in the first trimester.¹¹ The clinical presentation of ruptured tubal gestation may be varied and mimicking acute appendicitis, obstructed inguinal hernia and other acute abdomen.¹² There are some instances where no history of pregnancy may be noted¹³ but this contrary to the index the case.

The overwhelming influence of psychosocial health factors in the demise of this patient can't be neglected. Psychosocial health factors should be addressed in Rivers State, Nigeria to reduce maternal mortality. In this case a government owned hospital with better manpower and facility was located less than two hundred (200) metres from her residence but she opted for treatment for over two (2) days duration in an unregistered health centre been managed by an unlicensed local drug dispenser and despite it been located farer away from her residence when compared to the government owned hospital. This prompted her delay in commencing appropriate treatment and leading to the unfavorable outcome.

CONCLUSION

Ruptured tubal gestation has a high mortality rate in patients with coexisting psychosocial health factors and improper health care information. The post mortem examination was carried out to clarify the cause of death in this young patient. Nigerian medical regulatory authorities have failed and have been overwhelmed by these merchants operating illegal treatment centres. There is need for regulatory authorities in Nigeria to wake to their responsibilities. Finally there is also a need to build up self-regulatory health instinct to overcome the sublime quagmire of quackery in the medical profession in Nigeria and this can be done by improved proper personal health care information and individualized evaluation of health care centres which can be achieved by comparing the environment, facilities, services and personnel between the approved and suspected unapproved medical centre.



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