Death due to ruptured tubal pregnancy: A case report

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ABSTRACT

Ruptured tubal pregnancy is a life-threatening surgical emergency. It is the most common cause of first trimester morbidity, mortality and a major cause of early foetal wastage. Modern, improved diagnostic techniques and multimodality management have drastically reduced death from ruptured ectopic pregnancy. Postmortem examination was done on the body of a 29-year-old female with the history of sudden onset of acute severe abdominal pain, vomiting and missed period for five days. It revealed massive intraperitoneal haemorrhage and ruptured left fallopian tube. Microscopic examination of the ruptured segment of the fallopian tube confirmed ectopic implantation.

Key words: ruptured ectopic pregnancy, tubal pregnancy, intraperitoneal haemorrhage, postmortem diagnosis, first trimester mortality

Introduction

Normal pregnancy begins with the fertilization of an egg by sperm followed by implantation of the fertilized egg in the uterine cavity. When a fertilized ovum becomes implanted and develops outside the uterus, it is known as ectopic pregnancy. The most common sites of ectopic pregnancy are the fallopian tubes, the other sites are the cervix, ovary, and abdominal region cavity. During the first three months of pregnancy, ectopic pregnancy is the leading cause of maternal death in industrialized nations, and possibly the second most frequent cause in developing countries.[1] Ectopic pregnancy is reported in one in every 100 to 150 pregnancies with major risk factors including age, infertility, smoking, previous ectopic pregnancy, intrauterine device usage, pelvic inflammatory diseases.[2] Ectopic pregnancy should be suspected when a woman presents with a history of abdominal pain, vaginal bleeding and a positive pregnancy test. Prompt diagnosis and timely management can be lifesaving. Unattended tubal pregnancy can rupture and ultimately result in fatality.[3]

Case Report

A 29-year-old previously healthy female was brought dead to the casualty of our hospital. History from the husband revealed that she had abdominal pain

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over the last three days with vomiting around 4-5 times, prior to being brought to our hospital. She was under treatment by a private practitioner for abdominal pain and nausea. The practitioner advised some pain killers and an antiemetic. The next day she developed breathlessness, collapsed and died. A postmortem examination was conducted the next day.

Postmortem findings

The body was of a young adult female; rigor mortis was present only in the lower limbs with faint post mortem staining present and fixed over back. Eyes were closed, corneas were hazy, the conjunctivae were pale as was the body suggesting that death probably occurred a few hours prior to examination. Corneal haziness is a natural postmortem change that helps estimate the time since death, while closed eyes may indicate a peaceful death or postmortem handling. These signs, in the absence of trauma or manipulation, are consistent with early postmortem changes. No injuries were present. Internal examination showed about two litres of fluid blood and clotted blood in the peritoneal cavity and more clotted blood in the pelvic cavity (Figure 1). All internal organs were pale.

There was a rupture of the left fallopian tube with a rent of 2.7 x 1.4cm on the anterior surface of the isthmus region (Figure 2). A reddish mass measuring 1.4 x 0.7x 0.5 cm was seen (Figure 3). The right fallopian tube was patent. The uterus measured 9.3x7.5x3.5 cm (Figure 4). The left ovary showed a small cyst, and the right ovary was normal.

Histopathology of the left fallopian tube showed trophoblast and haemorrhage in the wall confirming the tubal pregnancy (Figure 5). The left ovary showed a corpus luteum and cystic follicle. The uterus showed endometrial glands in the secretory phase, decidual changes in the stroma and foci of haemorrhage.

Figure 1. Massive intraperitoneal haemorrhage

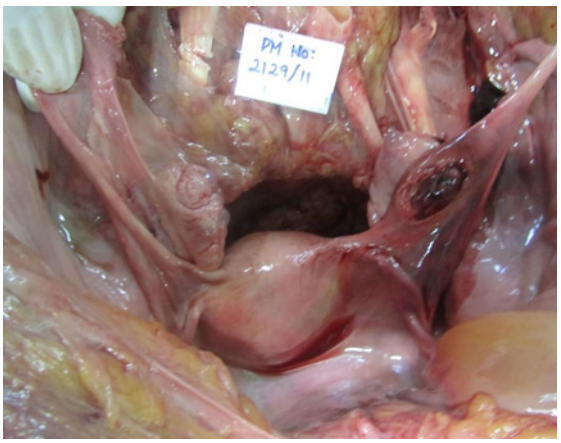

Figure 2. The anterior surface of the isthmus region

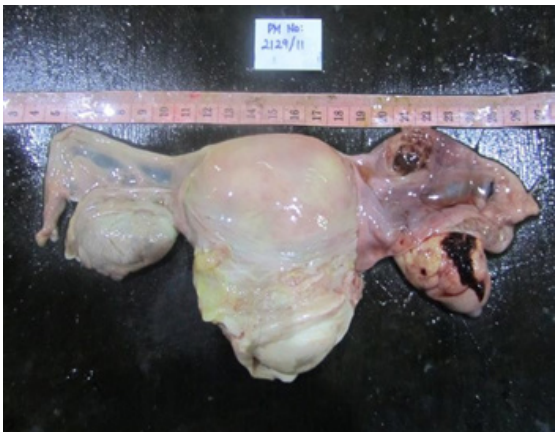

Figure 3. A reddish mass measuring 1.4 x 0.7x 0.5 cm

Discussion

Ectopic pregnancy, where the fertilized egg implants outside the uterus (most commonly in the fallopian tube), is the most common cause of maternal death during the first trimester. It typically ruptures between 6 to 10 weeks of gestation, leading to severe internal bleeding and potentially death if not treated promptly. While rupture usually occurs spontaneously, it can also be precipitated by trauma, sexual intercourse, or pelvic examination.[4-9] The symptoms often mimic other abdominal conditions such as appendicitis or hernia, making diagnosis challenging.

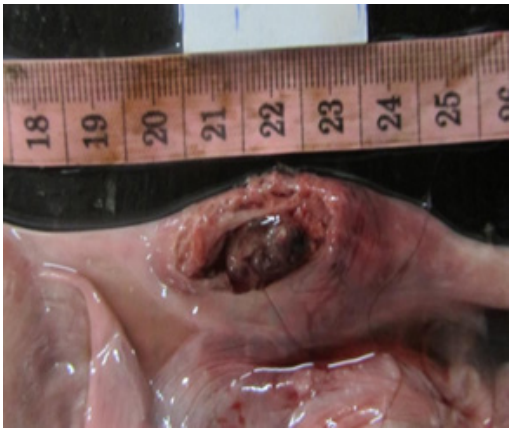

Figure 4. Uterus 9.3x7.5 x 3.5 cm with rupture of left fallopian tube

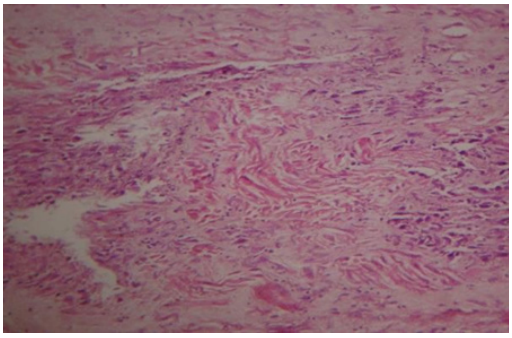

Figure 5. Histopathology of the left fallopian tube showed trophoblast and haemorrhage in the wall confirming the tubal pregnancy.

The global incidence ranges from 0.25% to 2%, with increasing trends due to rising rates of pelvic infections, tubal surgeries, and improved diagnostic capabilities. In India, ectopic pregnancies contribute to approximately 3.5%–7.1% of maternal deaths.[10-14] Despite a rise in cases, early detection has significantly reduced fatalities. Studies show that most affected women are between 20–30 years of age, the peak of reproductive activity.[15,16] Delayed presentation is often due to unawareness of pregnancy, misdiagnosis, or underestimation of symptoms. In the discussed case, a young married woman's sudden death was initially suspected to be unnatural.[17,18] However, a detailed autopsy revealed the cause as a ruptured tubal ectopic pregnancy, not related to any external trauma. Pregnancy was confirmed histologically, and no foul play was found. This case underscores the importance of early recognition of ectopic pregnancy symptoms and the critical role of detailed clinical and forensic evaluations in determining the true cause of death.

Conclusion

The incidence of ectopic pregnancy is increasing and is high in developing countries due to late referral and diagnosis. A strong clinical suspicion in females of reproductive age with amenorrhoea, with investigations like abdominal and pelvic ultrasonography, can lead to early diagnosis of ectopic pregnancy. Early diagnosis and treatment of ectopic pregnancy provide an opportunity to prevent a ruptured fallopian tube.

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