



Pathology Biology Section – 2009

G39 Fatal Rupture of Splenic Artery Aneurysm in a Pregnant Woman With Portal Hypertension

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By attending this presentation, attendees will learn about important pathological characteristics of splenic artery aneurysms, their causative correlation with pregnancy and portal hypertension, as well as clinical and medicolegal aspects of cases where their rupture leads to a fatal outcome.

This presentation will impact the forensic community by demonstrating how development of splenic artery aneurysm may be connected with pregnancy and portal hypertension; it is a potential source of profuse abdominal hemorrhage and sudden unexpected death, sometimes in previously apparently healthy individuals. Also of importance in this particular case is the patient's intention to hide a known disease from the attending physician, which may cause serious and potentially fatal errors in medical treatment.

Fatal complications of pregnancy and childbirth always attract special public and medical attention and are usually a serious challenge for forensic pathologists, especially if death occurs suddenly and unexpectedly in a previously apparently healthy woman. This case concerns a 30-year-old female, five months pregnant with her first child, who was found dead in her flat. According to the statement of the husband, cited in the initial police report, she had regular check-ups with her obstetrician. During pregnancy she did not complain of abdominal pain or any other discomfort. On the day in question the husband left the flat at 7:00 p.m. while she stayed at home preparing a meal. When he came back one hour later he found her lifeless, lying on the bed in their bedroom. He immediately called an ambulance; they arrived promptly and attempted CPR but to no avail; she was declared dead at the scene. The cause and manner of death were undetermined and the examining magistrate requested a medicolegal autopsy.

The postmortem examination showed a female of moderate physique, 167cm in height, with external signs of pregnancy in keeping with the gestational age of five months. The skin and conjunctivae were very pale and hypostasis was poorly developed. There was evidence of attempted resuscitation. There was no evidence of external trauma. Internal examination of the cranial and chest cavities revealed only pallor of all organs and tissues, but no other significant pathological findings. Opening of the abdomen showed about 4500 ml of blood in the peritoneal cavity. Examination of the uterus and adnexa showed no evidence of ruptures or other possible source of bleeding. Within the uterine cavity was a dead female fetus, normally developed according to gestational age. The other possible site of hemorrhage was an extremely enlarged spleen, which weighed 780 g, but showed no evidence of rupture. Finally, the source of bleeding was discovered by examination of the splenic artery, which was dilated throughout its course (with a circumference measuring up to 1.5 cm), tortuous, with one 1 cm long fusiform and two big saccular aneurysms, measuring 4 cm and 2 cm in diameter. The larger of the two saccular aneurysms showed a 0.5 cm long rupture, while attached to the smaller of the two was an accessory spleen, measuring 1 cm in diameter. There were several further accessory spleens in the vicinity, with a diameter varying between 0.5 cm and 1.5 cm. The portal vein was almost completely obliterated by an old partly calcified thrombus. Death was deemed natural, caused by exsanguination due to a ruptured splenic artery aneurysm. During interview with the deceased's husband it became apparent that all the above mentioned severe pathological changes involving the splenic artery, spleen and portal vein, with portal hypertension, had been diagnosed both radiologically and clinically two years prior to the fatal outcome. According to the deceased's medical records, this important anamnestic information had not been disclosed to the obstetrician who controlled her pregnancy.

The important pathological, clinical, and medicolegal issues concerning the reported case, mainly the causative relationship between pregnancy, portal hypertension, and splenic artery aneurysm, clinical recommendations regarding pregnancy in women with diagnosed splenic artery aneurysm as well as medicolegal problems connected to patient-physician relationship, and potential accusations of medical negligence and malpractice will be discussed.

Splenic Artery Aneurysm, Pregnancy, Portal Hypertension