

Splenic artery aneurysm rupture: a case report

Abstract

Splenic artery aneurysm (SAA) is the most common type of intraabdominal aneurysm after aortic and iliac artery aneurysm. Visceral artery aneurysms are seen rarely but they are fatal. SAA constitute more than half of all visceral artery aneurysms that are seen. The splenic artery aneurysm is four times more common in women than in men and in the majority of women is discovered during gestation period. Our aim in this case report is to improve clinicians' awareness of spontaneous SAA rupture in pregnancy, which is rare but fatal, and may help to reduce maternal and infant mortality rates. In the story of our case; it is stated that a 30-year-old, 9-month-old pregnant woman fell ill at home, collapsed, and wanted to be taken to the hospital by her husband, informed to the emergency service by phone, and died when taken to the hospital. For autopsy, she's taken to the Forensic Medicine Institution Adana Group Presidency Morgue. At the autopsy; it's observed that the area between the pancreas, the spleen and the stomach had condensed hematoma. It's detected that splenic artery aneurysm was ruptured in the 1/3 tail of the pancreas. The cause of death was reported as hematocele due to rupture of the splenic artery aneurysm.

Examination of pregnant women with risk factors (such as existing collagen tissue diseases, liver diseases) in terms of SAA would be beneficial in reducing maternal and fetal mortality. In addition, since splenic artery aneurysms incidentally caught in pregnant women are more likely to have rupture, it is necessary to apply the necessary treatment regardless of the diameter of the aneurysm.

Keywords: splenic artery, aneurysm, rupture, death, pregnancy

Volume 6 Issue 5 - 2018

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Received: June 25, 2018 | **Published:** September 24, 2018

Background

Splenic artery aneurysm is the third most common type of intraabdominal aneurysm after aortic and iliac artery aneurysms.¹ Visceral artery aneurysms may be fatal, although rarely seen. In autopsy series it is encountered between 0,01% and 0,2% and is mostly seen in the elderly population.² Splenic artery aneurysms constitute more than half of all visceral artery aneurysms that are seen.³ The splenic artery aneurysm is four times more common in women than in men and in the majority of women are discovered during gestation period.⁴ In the past, due to rupture death cases of visceral artery aneurysms were encountered in more autopsy series, nowadays diagnosis can be made in asymptomatic period by using methods such as computerized tomography and angiography.⁵ Our aim in this case report is to improve clinicians' awareness of spontaneous splenic artery aneurysm rupture in pregnancy, which is rare but fatal, and may help to reduce maternal and infant mortality rates.

Case presentation

In the story of our case; it is stated that a 30-year-old, 9-month-old pregnant woman fell ill at home, collapsed, wanted to be taken to the hospital by her husband, informed to the emergency service by phone, and died when taken to the hospital. For autopsy, she's taken to the Forensic Medicine Institution Adana Group Presidency Morgue. At the autopsy; it's observed that the area between the pancreas, the spleen and the stomach had condensed hematoma. It's detected that splenic artery aneurysm was ruptured in the 1/3 tail of the pancreas (Figure 1). The cause of death, was reported as hematocele due to rupture of the splenic artery aneurysm.

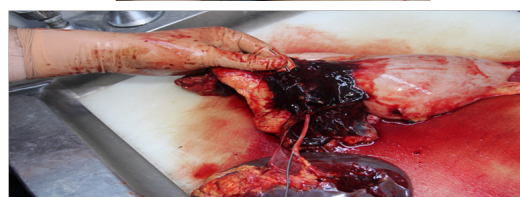


Figure 1 Hematoma between the pancreas, the spleen and the stomach and ruptured splenic artery aneurysm in the 1/3 tail of the pancreas.

Discussion

More than 400 cases of splenic artery aneurysms have been reported in the literature, and more than 100 cases have been reported during pregnancy.⁶ The primary complication of splenic artery aneurysm is rupture and it is encountered between 3-9%. While 20-50% of cases of SAA rupture were encountered during pregnancy, 69% of these cases were observed to have occurred in the last trimester of pregnancy.⁴ SAA ruptures that occurred in pregnancy have been reported to result in 70% maternal death and 90% fetal loss.⁷ In the general population, mortality rate due to SAA rupture is 25%.⁸ The splenic artery becomes more vulnerable due to increased gestational estrogen, progesterone, and relaxin levels, resulting in increased arterial wall elasticity, increased gestational physiological changes such as increased cardiac output and blood volume.⁹ Splenic artery aneurysms are usually asymptomatic and when a rupture occurred, a sharp epigastric pain and subsequent severe vomiting can be seen.⁴ In most cases, hemorrhagic shock develops very suddenly. In most cases, clinicians, accidentally confuse with sudden hypovolemic shock with uterine rupture or premature's early separation of the uterus and, in some cases, because of findings such as non-specific pain, dyspepsia, abdominal strain, it can be interpreted as the natural course of pregnancy.¹⁰ Approximately 50% of the SAA ruptures seen in the pregnancy were found to have aneurysm diameter less than 2cm.⁴ It will be useful for clinicians to consider SAA rupture in pregnant women, especially those with hypovolemic shock and acute abdomen in the last trimester. Since SAA is a very rare condition in the community, Scanning all pregnant women in this regard is not considered reasonable.

Conclusion

Examination of pregnant women with risk factors (such as existing collagen tissue diseases, liver diseases) in terms of SAA would be beneficial in reducing maternal and fetal mortality. In addition, since splenic artery aneurysms incidentally caught in pregnant women are more likely to have rupture, it is necessary to apply the necessary treatment regardless of the diameter of the aneurysm.

Acknowledgements

None.

Conflict of interest

The author declares that there is none of the conflicts.

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