



H135 A Fatal Hemorrhage From a Periumbilical Wound: A Case of Stabbing or a Rare Bleeding From a Caput Medusae?

*Francesca Frigiolini**, Genova 16143, ITALY; *Sara Lo Pinto, MD*, University of Genova, Genova 16146, ITALY; *Fiorella Caputo, MD**, Department of Legal and Forensic Medicine, Genova 16132, ITALY; *Rosario Barranco**, University of Genova, Department of Legal Medicine, Genova 16132, ITALY; *Giulio Fraternali Orcioni, MD*, Department of Clinical Pathology, Genova 16132, ITALY; *Alessandro Bonsignore, MD, PhD**, University of Genova, Genova, Liguria 16132, ITALY; *Francesco Ventura, MD**, Department of Legal Medicine University of Genova, Genova 16132, ITALY

Learning Overview: After attending this presentation, attendees will have learned about a rare complication of portal hypertension in a context of Hepatitis C Virus (HCV) -related liver cirrhosis.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by bringing attention to the importance of conducting a complete autopsy examination, supported by histological studies, in all patients with portal hypertension in order to identify skin wounds that could be a sign of an ectopic varix rather than a case of stabbing. This presentation will also raise awareness in the clinical community for understanding a complication of portal hypertension which, without a proper treatment, could be fatal.

Portal hypertension is a serious complication of chronic liver disease. Varices are the most common clinical manifestations, and variceal bleeding is the predominant cause of mortality in patients with portal hypertension. The most common site of varices is the lower esophagus, but they may occur at any location where there are portosystemic anastomoses, including the periumbilical venous plexus. Periumbilical varices are known as “caput medusae.” Deaths due to exsanguination from periumbilical variceal rupture are rare with only two such fatalities reported in the literature.

A 55-year-old man was found dead in a hotel room. He was lying on the floor near the bed in a prone position. The body was surrounded by a large pool of blood that extended (in drips and stripes) to the bathroom floor. The pattern of blood suggested that the man had moved from the bathroom to the bedroom, where he then died. The external examination of the body revealed a small round wound close to the umbilicus. On pressing the abdomen, blood was seen to flow from the wound, thus establishing the origin of the hemorrhage. No further injuries were detected. A review of the decedent’s medical history revealed that he was affected by type II diabetes mellitus, HCV-related liver cirrhosis, and portal hypertension. He also had a liver tumor, which had been treated with chemotherapy, and was waiting for a transplant.

Autopsy revealed a cirrhotic liver with firm parenchyma. Evidence of portal hypertension included dilatation of the vena cava, splenomegaly, and intact esophageal varices. No blood was recovered from either peritoneal cavity, nor was evident in the gastrointestinal tract. A relevant finding was the presence of abnormally dilated and convoluted veins in the subcutaneous tissue of the umbilical region (i.e., caput medusa). The abdominal wound depth was established with the help of a probe, showing that the injury extended deep into the subcutaneous fat and the periumbilical veins. All these autopsy investigative findings served to exclude a stabbing injury. Histologic sections showed that the abdominal wound consisted of epidermidis located on top of an ectatic venous vessel with a focally interrupted wall. In the subcutaneous tissue, there was a widespread presence of ectatic vessels of medium to large caliber. These histologic findings confirmed that one of the periumbilical varices had ruptured and connected with the overlying skin through a fistula that was likely formed due to inflammation. Ultimately, the cause of the death was attributed to massive hemorrhage due to periumbilical varix rupture with cutaneous fistula formation in a patient with portal hypertension attributable to HCV-related liver cirrhosis.

In conclusion, only by careful and complete autopsy—including histologic analysis, medical record review, and circumstantial scene investigation—is the correct final diagnosis obtained in extremely rare and complicated cases such as this. Moreover, this case highlights the importance of evaluating for the presence of possible varices in less-common locations when dealing with patients affected by portal hypertension.

Caput Medusae, Portal Hypertension, Fatal Hemorrhage