CASE REPORT ON SUDDEN DEATH DUE TO RUPTURED ESOPHAGEAL VARICES – AN AUTOPSY BASED DIAGNOSIS

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ABSTRACT Late presentation of many of the pathological conditions, leads to their in undiagnosed which culminating in sudden death. Among the various pathological conditions, gastrointestinal bleeding accounts for 10% of all sudden deaths among which oesophageal varices is an essential cause of bleeding and death. Here, we are presenting an undiagnosed case of esophageal varices that lead to the sudden death of an unknown male individual due to acute bleeding which was diagnosed later on autopsy.

KEYWORDS Sudden death, Esophageal varices, Bleeding, Cirrhosis

Introduction
The World Health Organization defines sudden death as death within 24 hours from the onset of symptoms.[1] 10% of sudden total deaths are related to the gastrointestinal causes.[2] Among the various gastrointestinal causes, upper gastrointestinal bleeding is one of the most common cause. In upper gastrointestinal bleeding, esophageo variceal bleeding is a life-threatening condition. It is a well-known fact that the most common cause of esophageal varices in liver cirrhosis. Over 80% of patients with liver cirrhosis are likely to develop esophageal varices.[3] Acute bleeding or re-bleeding from ruptured esophagogastric varices is one of the most severe complications of cirrhosis which culminate to sudden death[4]. Existing literature indicates that the mortality rate with variceal bleeding episode is 30-50%.[5] Variceal hemorrhage is a medical emergency in which up to 20% of patients die due to hemorrhage refractory to standard treatment, either because of failed bleeding management or as a result of early rebleeding, which may occur in nearly 70% of cases6. In the present case, an unknown male individual got admitted in an unconscious state with suggestive findings of upper GI bleed which remains undiagnosed during treatment and was confirmed at autopsy. Interesting findings of the case are mentioned below.

Case report
A passerby noticed that an unknown male individual was lying unconscious near the sub-divisional magistrate residence of a neighbouring district. He called an ambulance and the patient was referred to tertiary care from the local hospital. The patient remained in the tertiary care center for about 12 hours but as time was wasted on paper formalities, no proper diagnosis was established and the patient died. The dead body was then referred to our mortuary for autopsy.

AUTOPSY FINDINGS

EXTERNAL FINDINGS: The dead body was of a poor built young adult male individual. Both eyes were closed. The mouth was closed. The deceased looked markedly wasted, icteric and pale. Dried blood clots were present around the mouth. There was no evidence of struggle or violence marks on the body as well as no sign of decomposition.

INTERNAL FINDINGS: Brain and lungs were edematous and congested. Esophagus: The inner aspect of the lower one-third of esophagus showed multiple varices of varying size; few of them were ruptured. Tortuous blood vessels were present over the lower half of the esophagus which was later confirmed by microscopy. [Figure 1]
The stomach contained about 500 cc of reddish-brown liquid blood along with few clots. The mucosa was hyperemic at places. Externally brownish-black hue was present over the small intestine and contained brownish-black colored blood admixed with liquid chyme. [Figure 2]

The liver was found adhered to the right dome of the diaphragm. The surface of the liver was coarse with micronodules over it. Consistency of the liver was firm to hard and both, the outer and cut surface of the liver showed tan yellowish appearance [Figure 3].

Histopathological examination of the liver showed perivenular and pericellular fibrosis, regenerating parenchymal nodules separated by dense bands of fibrosis, mild periportal inflammation comprising of lymphocytes and plasma cells and hepatocytes. Autopsy findings were confirmed by histopathological examination. [Figure 4]

Discussion

Instead of returning directly to the heart, venous blood from the gastrointestinal tract is delivered to the liver via the portal vein before reaching the inferior vena cava. This circulatory pattern is responsible for the first-pass effect, in which the liver processes drugs and other materials absorbed in the intestines before entering the systemic circulation. Diseases that impede this flow cause portal hypertension, which can lead to the development of esophageal varices, an essential cause of esophageal bleeding. Thus, portal hypertension induces development of collateral channels that allow portal blood to shunt into the caval system. However, these collateral veins enlarge the subepithelial and submucosal venous plexi within the distal esophagus. These vessels termed varices, develop in 90% of cirrhotic patients, most commonly in association with alcoholic liver disease. Worldwide, hepatic schistosomiasis is the second most common cause of varices. Varices often are asymptomatic, but their rupture can lead to massive hematemesis and death. Variceal rupture, therefore, constitutes a medical emergency. Despite the intervention, as many as half of the patients die from the first bleeding episode, either as a direct consequence of hemorrhage or due to hepatic coma triggered by the protein load that results from intraluminal bleeding and hypovolemic shock. Among those who survive, additional episodes of hemorrhage, each potentially fatal, occur in more than 50% of cases. As a result, greater than half of the deaths associated with advanced cirrhosis result from variceal rupture. [7]
It is a well known fact that gastrointestinal causes contribute about 10% of cases of sudden death. In gastrointestinal causes bleeding due to esophageal rupture is one of the most common cause. The similar findings cause sudden death due to rupture of esophageal varices is noted by the many authors.

In a study by Sharma et al., a 48 years old male individual was found unconscious at his workplace. After admission in hospital and before the establishment of diagnosis, he succumbed to death. He was a chronic alcoholic and esophageal varices were diagnosed on autopsy.

In another case report by Ossei et al., a 53 years old male individual with a history of chronic alcoholism, was reported to have been found dead in front of his room at the lawn. The diagnosis of death due to massive haemorrhage due to rupture of esophageal varices was made at autopsy.

Shetty et al. reported a case in which a seventy years old male, a manual labourer by occupation suddenly had episodes of vomiting of blood and then collapsed on to the ground while he was on his way to work. The root cause of bloody vomiting was made out during autopsy i.e. rupture of oesophageal varices. He had a history of chronic alcohol consumption.

There are many cases reported by different authors that many individuals died due to esophageal varical bleeding. Many individuals who were chronic alcoholics and in most of the cases individuals died before getting the proper diagnosis and treatment, and most of the cases were diagnosed on the autopsy table. The actual number of such fatalities must be much more than those reported.

**Conclusion**

Alcohol abuse has a crushing impact on human lives particularly in developing nations. In alcoholics, screening related to the condition of liver or cirrhotic changes should be mandatory and patients in which cirrhotic changes are present prophylactic measures should be taken to avoid sudden death due to haemorrhagic shock. The possibility of esophageal varices should be kept in mind during the treatment, if there is history of hae matemesis.

**Conflict of Interest**

The authors declare no conflict of interest.

**References**