Pancreatic Arteriovenous Malformation: A Rare Cause of Upper Gastrointestinal Bleeding

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Pancreatic arteriovenous malformation (AVM) is a rare disease which commonly presents with upper gastrointestinal bleeding (UGIB). We report a case of pancreatic AVM which presented with UGIB. A 39-year old male presented with melena for one day. He complained of dizziness and faintness. The patient has bronchial asthma and drank 2 bottles of Soju 2 times a week. His vital signs were as follows: blood pressure 120/80 mmHg, heart rate 70 beat/minute, respiratory rate 20 times/minutes, and body temperature 37.2℃. Complete blood count showed white blood cell count of 6400/mm3, hemoglobin concentration 5.2g/dL, and platelet count of 154,000/mm3. Initial esophagogastroduodenoscopy (EGD) showed a small angioectasia with active bleeding at lateral wall of duodenal second portion (Figure 1). Hemostasis was successful after hypertonic saline injection and argon plasma coagulation. Because of falling hemoglobin despite transfusion, EGD was done again next day. A small exposed vessel with active bleeding was noted at the medial wall of duodenal third portion (Figure 2). Hemostasis with hypertonic saline injection was done but further hemostasis was precluded due to hypotension. Urgent angiography revealed hypervascularities and early drainage vein opacification at the pancreatic head and around the duodenal third portion. Abdominal computed tomography demonstrated AVM in the uncinate process of pancreas and duodenal third portion (Figure 3). Angiography and embolization of anterior and posterior superior pancreaticoduodenal arteries were performed by using gelatin slurry. In order to achieve complete hemostasis and definite treatment of pancreatic AVM, the patient underwent pylorus-preserving pancreaticoduodenectomy. Pathologic examination showed many dilated blood vessels in the pancreatic parenchyme (Figure 4). The patient had recovered and went home. Unlike some of previous cases that reported successful treatment with embolization, this case had to undergo pancreaticoduodenectomy after embolization in order to achieve complete hemostasis. Pancreatic AVM should be included in the differential diagnosis of upper gastrointestinal bleeding.

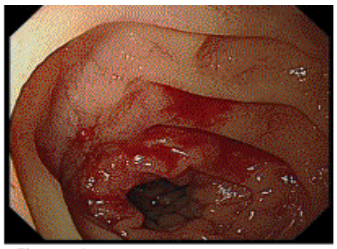

Figure 1.

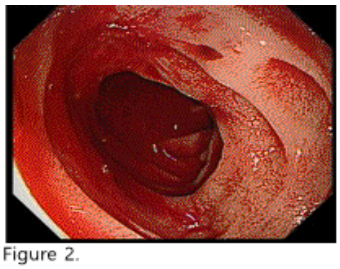

Figure 2.

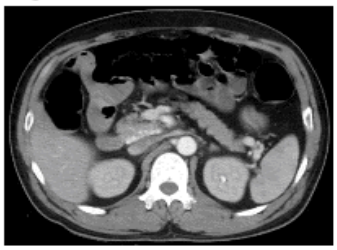

Figure 3.

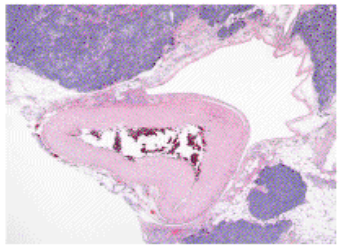

Figure 4.

Figure 1. EGD showed a small angioectasia with active bleeding at lateral wall of duodenal second portion

Figure 2. Second EGD showed a small exposed vessel with active bleeding noted at the medial wall of duodenal third portion.

Figure 3. Abdominal CT demonstrated AVM in the uncinate process of pancreas and duodenal third portion

Figure 4. Pathologic examination showed many dilated blood vessels in the pancreatic parenchyme (H&E, x20).