

Spontaneous Second Intercostal Artery Bleeding Complicated with Massive Hemothorax after Lower Limb Angioplasty Procedure

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Introduction: This is an extremely rare case of left massive hemothorax secondary to a spontaneous rupture of an intercostal artery. Presenting with a combination of hypovolemic and obstructive shock.

Case: A 42-year-old male with PMHx of polysubstance, and Buerger's disease presented with right lower limb ischemia. Patient underwent RLE angiogram and balloon angioplasty. Intraoperatively, he received 11,000 unit of heparin. In the PACU, he became unresponsive and went into a severe shock state, intubated and resuscitated with IV fluid and vasopressors. Examination showed absence breath sounds in the left lung. CTA chest showed large left hemothorax with linear contrast extending from the posterior second intercostal artery compatible with acute hemorrhage with right mediastinal shift. Massive transfusion protocol was initiated. Angiogram showed bleeding from the Lf posterior 2nd intercostal artery. Transthoracic arterial coil embolization was performed and successfully stopped the bleeding. Two left-sided chest tubes were placed and 1 L of frank blood was drained. Next day, his vitals were stable, and was extubated to room air.

Discussion: Spontaneous intercostal artery bleeding is extremely rare and reported in patients with underlying disorders, such as neurofibromatosis type 1, SLE, coarctation of aorta, Kawasaki disease, or Ehler-Danlos. High blood pressure or physical can trigger intercostal artery bleeding. We believe that our patient is the first reported case of spontaneous second intercostal artery bleeding in absence of underlying disorders. Being fully anticoagulated with high-dose heparin during the angioplasty and being agitated with forceful movement directly after weaning off the sedation might have caused the spontaneous rupture.