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How Soon Is Too Soon? General Anesthesia after Coronary Intervention with Bare Metal Stents

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Case Presentation: A 66-year-old male with significant history, including coronary artery disease (CAD), diastolic dysfunction, hypertension, lung cancer, pancytopenia, HIV, cirrhosis with ascites, and jaundice, presented for endoscopic retrograde cholangiopancreatography (ERCP) and biliary stent placement under general anesthesia. Patient was admitted to hospital 22 days earlier with dyspnea; cardiac workup led to placement of 2 bare metal stents (BMS) to his mid left anterior descending artery. Patient was discharged home and returned 10 days later with jaundice and nausea/vomiting. After admission, patient developed a severe upper gastrointestinal (GI) bleed. Patient was intubated for decreased mental status and impending respiratory failure secondary to either aspiration or pulmonary emboli. Antiplatelet therapy was held during the acute bleeding episode, and patient developed lower extremity deep vein thromboses (DVTs) despite a coagulopathy with elevated international normalized ratio (INR) attributed to liver dysfunction. Patient received several blood transfusions, GI bleeding resolved with clipping, and antiplatelet therapy was reinstated. Respiratory function and mental status improved and patient was extubated. When patient presented for ERCP, his physical exam revealed a cachectic male who had stable vital signs and severe jaundice and was somewhat somnolent but able to answer direct questions. The GI interventional physicians were willing to proceed on antiplatelet therapy.

Discussion: This case highlights the need for further investigation and education regarding the timing of anesthetics after coronary interventions. American College of Cardiology/American Heart Association guidelines recommend at least 4 and ideally 6 weeks after placement of BMS to permit neoendothelialization to occur and minimize risk of major cardiac events. Recent articles in *Anesthesiology* suggest that longer delays proportionally decrease cardiac events. Although the patient was having a low-risk procedure, his temporal proximity to BMS placement put him at high risk for in-stent stenosis with high mortality rates. The patient seemed to be at particularly high risk of stenosis given his development of DVTs while coagulopathic. The procedure was delayed until cardiology could see the patient and a discussion among all attending care providers—anesthesiology, gastroenterology, hepatology (primary service), and cardiology—could take place. After that discussion, informed consent could be obtained from the patient and family and realistic treatment goals could be conveyed.

Conclusions: Timing of noncardiac surgery after percutaneous coronary intervention with placement of stents requires a multidisciplinary approach that allows for a full evaluation of risks and benefits in order to maximize patient outcomes.