



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

**Conclusions:** Significantly increased success rates in (right-sided) selective cannulation of AVS procedures could be achieved by combining established hormone indices with collimated CACT. This offers a successful alternative to previously published AVS analysis algorithms with lower radiation exposure as compared to a full-FOV CACT.

### Abstract No. 183

#### Search for the offending clot and to filter or not: embolic versus thrombotic pulmonary embolism in COVID-19

A. Anavim<sup>1</sup>, R. Ahuja<sup>1</sup>, A. Desai<sup>2</sup>, J. Yun<sup>1</sup>, B. Natarajan<sup>1</sup>; <sup>1</sup>Albert Einstein Medical Center; <sup>2</sup>Einstein Health Care Network

**Purpose:** Emerging reports have shown an increased incidence of pulmonary embolism (PE) in hospitalized COVID-19 patients which subsequently worsens respiratory distress and can lead to further clinical deterioration. We sought to determine whether PE in Corona virus patients were more likely thrombotic or embolic in etiology, and the role of IVC filters in hospitalized COVID-19 patients.

**Materials and Methods:** A single-center retrospective analysis evaluating all CT pulmonary angiograms (684) that were completed at the height of the COVID-19 pandemic between March 15, 2020, and May 31, 2020, at a tertiary care center in an urban setting. Deep venous thrombosis (DVT) was defined as ilioacaval or femoropopliteal thrombus on lower extremity Doppler or CT with lower extremity runoff, or brachial, axillary, subclavian, or internal jugular vein thrombus on upper extremity Doppler. PE was considered thrombotic in patients in the absence of DVT and embolic in the presence of DVT during their inpatient stay. COVID-19 status was based on the most recent results prior to the patient's CT pulmonary angiogram, if testing was not conducted, the patient was considered negative for COVID-19. Chi-square analysis was carried out to determine the difference in rates between thrombotic versus embolic PE in Corona virus positive and negative patients.

**Results:** Imaging confirmed acute PE in 112 patients during this period, of which 43 (38%) tested positive for COVID-19, and 69 (62%) tested negative. Of patients testing positive for Corona virus with PE, imaging confirmed concurrent lower or upper extremity DVT in 4 of 43 patients (9%) and ruled out DVT in 24 of 43 patients (56%). Whereas, in COVID-19 negative patients with PE, imaging confirmation of DVT was seen in 19 of 69 patients (28%) and DVT was ruled out in 21 of 69 patients (30%). This correlated with a chi-square value of 8.12 ( $P = 0.004$ ).

**Conclusions:** Pulmonary emboli in COVID-19 patients are more likely to be thrombotic rather than embolic in etiology, limiting the utility of IVC filters in Corona virus patients.

### Abstract No. 184

#### Radioembolization for metastatic succinate dehydrogenase-deficient gastrointestinal stromal tumors

C. Xue<sup>1</sup>, J. Minocha<sup>1</sup>, S. Rose<sup>1</sup>, J. Sicklick<sup>1</sup>, P. Fanta<sup>1</sup>, Z. Berman<sup>1</sup>; <sup>1</sup>University of California San Diego, San Diego, CA

**Purpose:** Succinate dehydrogenase (SDH)-deficient gastrointestinal stromal tumors (GIST) are a rare subset of GIST that mostly affect adolescents and young adults. SDH-deficient GISTs have the propensity to frequently metastasize to the liver. Because these tumors lack mutations in the proto-oncogene receptor tyrosine kinase, *KIT* and *PDGFRA*, they generally do not respond well to standard treatments for GIST. Surgical management is considered first-line treatment; however, due to the presence of often diffuse, bilobar liver metastases, hepatic resection is often not feasible. To date, few case series have described selective internal radiation therapy (SIRT) as a salvage treatment for unresectable GIST liver metastases with patients with *KIT* or *PDGFRA* mutant disease. We present outcomes of two teenage patients with SDH-deficient GIST hepatic metastases treated with Y90 SIRT using resin microspheres.

**Materials and Methods:** Two males (17 and 18 years old) with bulky or unresectable, bilobar SDH-mutant GIST liver metastases were treated with SIRT. The first patient underwent SIRT as a staged procedure with resin microspheres to treat the right then left hepatic lobes separately using body surface area (BSA) dosimetry. The second patient had SIRT performed of the left hepatic lobe, also using BSA dosimetry. Follow-up was obtained with clinical evaluation and repeat cross-sectional imaging for greater than 2 years.

**Results:** Both patients tolerated the SIRT procedures with minimal side effects and no major complications. Post procedural SPECT/CT scans showed appropriate Y-90 activity in the target hepatic lobes. Follow-up imaging (CT/MRI) demonstrated complete or partial response by Choi criteria and no recurrence/growth or new metastatic lesions in the treated territories up to two years later. Hepatic function has remained normal in both patients.

**Conclusions:** For the first time, we report a case series Y90 radioembolization for metastatic SDH-deficient GISTs and have shown it to be both safe and effective. This case series further supports SIRT to be well tolerated with durable tumor imaging responses of non-*KIT*/*PDGFRA* mutant GISTs.

### Abstract No. 185

#### Impact of anticoagulation and antiplatelet therapy on dialysis catheter fibrin sheath formation

F. Linch<sup>1</sup>, S. Thompson<sup>1</sup>, M. Jin<sup>1</sup>, R. Frimpong<sup>1</sup>, C. Reisenauer<sup>1</sup>, E. Takahashi<sup>1</sup>; <sup>1</sup>Mayo Clinic

**Purpose:** To determine the role of anticoagulation, antiplatelet medications, and other factors in delaying fibrin sheath formation

**Materials and Methods:** An IRB-approved retrospective review of all patients treated for tunneled dialysis catheter fibrin sheaths from January 2014 to January 2020 was undertaken. All catheters were symmetric tipped, 14.5F in diameter, and placed via the internal jugular vein. Seventy patients with venographically confirmed fibrin sheaths that developed after de novo catheter placement were identified. Recurrent fibrin sheaths were excluded. The impact of anticoagulation and antiplatelet therapy as well as statin therapy, catheter side (right or left), hematocrit, platelet count, prothrombin time (PT), and international normalized ratio (INR), on the time to fibrin sheath formation was determined.