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.

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Results: There were 38 patients (20 men, mean age 65 ± 14 years) who underwent CVD, with 110 vessels revascularized (58 innominate, 37 left common carotid, and 35 left subclavian, Table). Indications for TEVAR were type A dissection in 16 patients, type B dissection with aneurysmal degeneration in 12, thoracic aneurysm in 9, and perforated aortic ulcer in 1. Median duration between CVD and TEVAR was 38 days. Mean follow-up was 1.5 ± 1.8 years. Perioperative mortality, stroke, and paraplegia rates were 5.3%, 5.3%, and 2.6%, respectively. During the perioper- ative period, three endoleaks were identified, two of which required reintervention. Late deaths through 2 years occurred in five patients. Survival estimates were 82.1% and 77.8% at 1 year and 2 years, respectively. Overall primary patency was 96.8% through 2 years as a result of one- vessel occlusion at 18 months postoperatively.

Conclusions: CVD is a safe and effective means of extending proximal landing zone and thereby facilitating TEVAR with an outstanding primary patency rate. Longer follow-up analysis is needed to determine late risk of graft-related complications and mortality in these patients.

| Table. Method of great vessel debranching (CVD) |
|-----------------------------------------------|
| Ascending aorta based bypass | Reimplantation | Cross-cervical bypass | Carotid-subclavian bypass | Subclavian trasposition |
| Innominate | 30 | 8 | N/A | N/A | N/A |
| Left common carotid | 27 | 9 | 1 | N/A | N/A |
| Left subclavian | 10 | 8 | 13 | 3 | N/A |

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Revascularization Outcomes in COVID-19 Patients With Acute Limb Ischemia
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Objective: The aim of this study was to determine the characteristics and clinical outcomes of patients with the novel coronavirus (COVID-19) who presented with acute limb ischemia (ALI) at our institution. Where the pandemic is ongoing, early reports suggest the presence of a hypercoagulable state in COVID-19 patients that may be associated with increased thromboembolic complications and mortality.

Methods: This is a single-center retrospective review of patients presenting with ALI and an active diagnosis of COVID-19 pneumonia. The primary outcome was 30-day mortality. Secondary outcomes included successful revascularization and limb salvage. Successful revascularization was defined as absence of reocclusion of the target vessel at 30 days or death within 24 hours.

Results: There were 2269 patients admitted with COVID-19 pneumonia from March 2020 to May 2020, and we identified 10 patients with ALI. Of these patients, the mean age was 62 ± 12 years, and peak D-dimer level during hospitalization was 5696 ± 4695 ng/mL. Common comorbidities included hypertension (100%), diabetes (60%), chronic kidney disease (40%), and coronary artery disease (20%). None of the 10 patients had previous peripheral revascularization. All 10 patients were treated with systemic anticoagulation. Revascularization was performed in 4 (40%) patients, which was successful in 2 of 10 (20%) patients. Of the four revascularizations, one was endovascular and three were open. Overall 30-day mortality was 40%, with one death occurring in a patient who underwent revascularization. Major lower extremity amputations were performed in two (20%) patients and four (10%) limbs.

Conclusions: In our early experience, there were low rates of successful revascularization and high mortality in COVID-19 patients with ALI. This may be due to the hypercoagulable state and systemic illness observed in COVID-19 patients.

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Spinal Anesthesia and Outcomes After Thoracic Endograft Placement
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Objective: The purpose of this study was to assess outcomes after spi- nal vs general anesthesia in patients undergoing thoracic endograft placement and to evaluate concurrent use of spinal anesthesia in pa- tients undergoing spinal drain placement.

Methods: A single-center, retrospective review of 321 patients who un- derwent thoracic endograft placement from 2001 to 2019 was per- formed. Outcome variables included 30-day mortality and length of stay. Data were analyzed by Student t-test, χ² test, and multivariate logis- tic regression analysis.

Results: A total of 321 patients underwent thoracic endograft placement. 110 of these patients had spinal anesthesia, 210 patients had general anes- thesia, and 21 patients received spinal anesthesia and a spinal drain. Of the total patients, 11.5% underwent thoracic endograft placement for rupture. 16.8% for type B aortic dissection, 3.4% for type A aortic dissection (with resid- ual type B dissection), and 14.3% for penetrating ulcer. The mean age of the population was 68 years; patients undergoing spinal anesthesia were older with a mean age of 73.39 years vs 65.92 years for patients undergoing general anesthesia (P < .001). Fewer patients with renal comorbidities (9.9% vs 19.5%; P = .026) and smoking history (9.9% vs 24.8%; P = .001) underwent spinal anesthesia. Fewer patients with type B dissection (4.5% vs 23.3%; P < .001) had spinal anesthesia. Of the 21 patients who had spinal drain placement and spinal anesthesia, there were no neurologic complications. Length of stay was decreased in the spinal anesthesia group (4.43 days vs 11.19 days, P < .001). Neurologic complications were decreased in the spinal anesthesia group (0.89% vs. 6.13%; P = .027). There was decreased 30-day mortality (0.9% vs 7.1%; P = .015), reintervention (18.9% vs 30.3%; P = .026), and return to the operating room (6.3% vs 14.5%; P = .033) in the spinal anesthesia group.

On multivariate analysis; age >75 years (P = .001), ruptured aneurysm (P = .0125), and perioperative complications (P = .025) were associated with increased mortality after thoracic endograft placement.

Conclusions: There is less 30-day mortality, neurologic complications, and length of stay in patients receiving spinal anesthesia during thoracic endograft placement than in patients receiving general anesthesia. Con- current use of spinal drain and spinal anesthesia has similarly good outcomes.

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Open Inferior Vena Cava Filter Removal
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Objective: The last several decades have seen dramatic changes in the standards for both the insertion and removal of inferior vena cava (IVC) filters. Retrieveable and nonretrievable IVC filters can frequently be removed by endovascular techniques. Because IVC filters rarely cause symptoms or result in complications, those that cannot be easily removed are usually left in place. Open removal is reserved for IVC filters with complications or causing symptoms that cannot be removed by endovascular techniques.

Methods: The results of open IVC filter removal at a single academic medical center from January 2011 through June 2019 were reviewed.

Results: Nine open IVC filter removals were performed. Six (66%) pa- tients were female. The mean age was 46 years (range, 26-65 years). The filters had been in place for a mean of 6.6 years (range, 1-12 years). Six (66%) of the filters were originally placed because of deep venous thrombosis with pulmonary embolism in patients with contraindications to anticoagulation. Three (35%) were placed prophylactically in high- risk trauma patients not able to be anticoagulated. The most common