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sealing. When a re-intervention is needed, we have to consider that previous surgical and endovascular treatments modify the aortic anatomy, and the graft deployment may be tougher, with a higher risk of malrotation. Inner branched endograft could be a valid option in case of complex anatomies, but long term follow up is needed.

### O-106

#### Venous Thrombo-Embolism in an Outpatient Vascular Ultrasound Laboratory All-Comers Cohort with Recent COVID-19 Infection

Laura Capoccia\*, Wassim Mansour, Pasqualino Sirignano, Carlo Porreca, Ada Dajci, Valeria Galasan, Luca Di Marzo

*Vascular and Endovascular Surgery Division, Department of Surgery "Paride Stefanini", Policlinico Umberto I, La Sapienza University of Rome, Roma, Italy*

**Introduction:** Inflammatory mechanisms triggered and supported by SARS-CoV-2 infection can increase venous thrombo-embolism (VTE) risk.

**Aim:** The aim of the present comparative study was to report on the incidence of VTE in a prospective consecutive series of COVID-19 negative outpatients referred to our vascular ultrasound laboratory for suspected VTE with (COVID+) or without (COVID-) recent SARS-CoV-2 infection during the COVID-19 pandemic.

**Methods:** All patients included in the present study were assessed by duplex ultrasound for the detection of VTE. The following data were collected for each patient: time from first negative swab after COVID-19 infection and VTE diagnosis in COVID+ patients; administration of heparin prophylaxis during COVID-19 infection; presence of venous risk factors (previous VTE episode, chronic venous insufficiency, thrombophilia, recent surgery with prolonged immobilisation, history of malignancy, need for high dose steroid therapy, and dehydration during infection). Rate of VTE was detected and compared between the two groups of COVID+ or COVID- patients by chi square test for categorical data. The presence of risk factors for VTE were analysed as related to VTE occurrence in both groups.

**Results:** From 1 February 2021 to 31 March 2021, 34 patients were included in the study. Among them eight had previous SARS-CoV-2 infection and were negative at the time of investigation. In COVID+ patients, time from first negative swab after COVID-19 infection and VTE diagnosis ranged between 3 and 50 days (mean  $17 \pm 14.39$  days), and 12.5% ( $n = 1/8$ ) had heparin prophylaxis during infection. Risk factors for VTE were detected in all COVID+ patients and 80.7% ( $n = 21/26$ ) of COVID- patients. Rate of VTE was 87.5% ( $n = 7/8$ ) in COVID+ patients and 11.5% ( $n = 3/26$ ) in COVID- patients (odds ratio 53.66, 95% confidence interval 4.79 – 601.23;  $p < .001$ ). In the COVID+ population only one patient receiving heparin prophylaxis during infection did not present with VTE. One COVID+ patient presented with both arterial and venous popliteal thrombosis. By comparing directly COVID+ patients with no heparin prophylaxis and venous risk factors ( $n = 7$ ) to COVID- patients with venous risk factors ( $n = 21$ ), VTE risk was strongly associated with the presence of previous SARS-CoV-2 infection without proper heparin prophylactic administration ( $p < .001$ ).

**Conclusion:** In this preliminary series presence of risk factors for VTE and recent SARS-CoV-2 infection with no heparin prophylaxis is strongly associated with VTE occurrence. COVID-19 outpatients

should be treated by prophylactic heparin whenever VTE risk factors are detected and duplex ultrasound cannot be performed to exclude a VTE episode, so that physicians treating outpatients should be aware of the VTE risk in those patients. Both arterial and venous conditions prone to thrombosis should be fully assessed in patients when diagnosing a new SARS-CoV-2 infection.

### P-165

#### First Line Treatment of Infra-renal Abdominal Penetrating Aortic Ulcer: A Single Centre Experience with Ultra Low Profile Endograft

Erika Martin\*, Paola Scrivere, Andrea Pellegrin, Paolo Frigatti

*Azienda Sanitaria Universitaria Friuli Centrale, Udine, Italy*

**Introduction:** Penetrating aortic ulcers (PAU) are considered an atherosclerotic focal lesion disruption in the arterial intima and elastic lamina with a subsequent saccular aneurysm formation.

At the computed tomography angiography (CTA) scan, intimal calcification with an outpouching crater associated with narrow aortic carrefour and severe calcified proximal aortic neck represent typical PAU characteristics. Descending thoracic PAUs are more frequent (62%) than infra-renal abdominal aortic PAU (31%). Optimal treatments are still not well defined; however, the literature suggests conservative treatment of asymptomatic PAU with a slow growth rate and surgical treatment in the case of symptoms or rapid growth. The aim of this observational retrospective study was to evaluate the first line treatment in the case of abdominal PAU.

**Methods:** In our department, between January 2015 and December 2020, 270 patients underwent endovascular abdominal aortic procedures; of these, 24 patients (8.9%) were affected by abdominal penetrating aortic ulcers and treated with endovascular stent grafts (20 males, four females). Three patients presented with symptoms and signs of rupture; 21 were treated electively. The main aneurysm characteristics were narrow aortic bifurcation in 16 patients and mild to severe aortic calcified neck in 10 patients. The average diameter of the aneurysms was  $45.97 \pm 13.77$  mm. In those patients we performed different treatment strategies: in four cases endovascular aneurysm sealing (EVAS) was done, the double barrel technique was used in one patient, in 13 patients endovascular aneurysm repair (EVAR) was used (one tubular graft and 12 bifurcated grafts), and in six patients EVAR with ultra low profile stent grafts was done. Supra-renal fixation was chosen in 17 patients (71%) and infra-renal in six patients (25%). Sac embolisation with glue was performed in the case of patent inferior mesenteric artery ( $> 2.5$  mm diameter) associated with two lumbar arteries. Four patients underwent sac embolisation. All patients underwent follow up CTA at one, six, and 12 months. The mean follow up was at 15 months.

**Results:** Technical success was defined as complete intra-operative exclusion of the aortic aneurysm and was achieved in all patients (100%). No patient needed a surgical conversion. At the follow up CTA we detected type II endoleaks (ELs) in four patients (16.6%); two early type II ELs and two late type II ELs; three required no treatment and one was treated with embolisation due to sac enlargement. At mean follow up no iliac branch occlusion or endograft migration were detected. Two patients treated with