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.

pleuritic pain, sore throat, chills, and gastrointestinal symptoms such as severe nausea, diarrhea, and loss of smell and taste may occur. Pediatric patients are more likely to present with pyrexia, dry cough, and wheezing.[1,2] Being a highly sensitive biomarker for thromboembolic conditions, D-dimer has been associated with higher mortality in intensive care patients. Initiation of full anticoagulation early on may be beneficial to mitigate the incidence of pulmonary emboli in patients with coronavirus disease-19. The current definitive diagnostic test is a real-time reverse polymerase chain reaction test. It is very specific, but only 60% to 70% sensitive, and needs repeated if clinical concern exists. Some physicians will use findings of a computed tomography scan or chest radiograph as a surrogate.

What we should know: (1) Social distancing seems to work. (2) Transmission is via cellular attachment of its spiky-shaped surface proteins to angiotensin-converting enzyme 2 receptors in the lung and/or heart with presentations of respiratory and/or cardiovascular symptoms.[3] (3) transmission are usually droplets (aerosols) and fomites. (4) Laboratory findings include lymphopenia, an increase in prothrombin time, and an increase in lactate dehydrogenase. (5) Older patients and those with multiple comorbidities tend to have more symptoms and intensive care admissions. (6) Most patients can be treated at home. (7) Serious complications include acute respiratory distress syndrome, myocarditis, acute kidney injury, sepsis, and multiorgan failure. (8) The virus can survive on some surfaces up to 72 hours. (9) It is safe and effective to sterilize and reuse N95 respirators.

Workforce: (1) A command center for adherence to national and local guidelines.[4] (2) An emergency room "forward" triage off-site for screening/guiding treatment for less severe illness,[5] splits the flow of patients, mitigates overloading the regular emergency room, and prevents significant exposure. This triage area should have four levels: (a) front-door screening, (b) field tent (c) nurse-led triage, and (d) evaluation by a physician or mid-level practitioner. (3) Establish a "suspected" as well as "confirmed" units with capabilities including intensive care beds and intermediate units.[6] These units should have the following guidelines: (a) full personal protective equipment, (b) negative-pressure rooms, (c) ventilators and (d) telehealth.

In conclusion, a proactive multidisciplinary team approach as well as reinforcing awareness are key in controlling the crisis.

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REFERENCES

1. Ng JJ, Ho P, Dharmaraj RB, Wong JCL, Choong A. The global impact of COVID-19 on vascular surgical services. J Vasc Surg 2020;71:2182-3.
2. Rasmussen TE, Koelling EE. A military perspective on the vascular surgeon's response to the COVID-19 pandemic. J Vasc Surg 2020;71:1821-2.
3. Del Rio C, Malani PN. COVID-19-new insights on a rapidly changing epidemic. JAMA 2020;323:1339-40.
4. Adams JG, Walls RM. Supporting the health care workforce during the COVID-19 global epidemic. JAMA 2020;323:1439-40.
5. Shah PB, FGP Welt, Mahmud E, Phillips A, Kleiman NS, Young MN, et al. Triage considerations for patients referred for structural heart disease intervention during the coronavirus disease 2019 (COVID-19) pandemic: an ACC /SCAI consensus statement. JACC Cardiovasc Interv 2020;13:1484-8.
6. Adalja AA, Toner E, Inglesby TV. Priorities for the US health community responding to COVID-19. JAMA 2020;323:1343-4.

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Argentine experience with telemedicine for venous care during the COVID-19 pandemic

On March 11, 2020, the World Health Organization declared the coronavirus disease-19 (COVID-19) a pandemic and part of the response strategy included isolation and quarantine.

Regarding venous practice, most outpatient visits are not urgent and appointments can be postponed. However, to continue providing medical care, telemedicine emerged as the primary mechanism for responding to patients' nonurgent needs while keeping them safe and at home, conserving personal protective equipment, and protecting healthcare workers. It may also be the best solution to avoid overcrowding of medical units after the COVID crisis.

Although telemedicine was shown to be effective in reducing waiting time, travel distance and costs[1-3] and demonstrated good results when used in surgical fields,[4-7] it has never been implemented as widely as it is today.

The Hospital Italiano de Buenos Aires is a nonprofit organization with 165 years of history in Argentina. Annually, 45,000 surgical procedures and 3,000,000 outpatient visits take place. The Phlebolymphology Unit performed more than 400 ablation procedures in 2019.

While facing the pandemic, we replaced 100% of in-person visits by synchronic telemedicine, using a program developed by the Department of Health Informatics[8] that integrates a personal and electronic health record without the need to use an external platform to prescribe medication, or order and check studies. We are using telemedicine for follow-up of patients with chronic vascular disease and first evaluation of new complaints to determine whether they should be urgently

referred to the face-to-face evaluation or can be delayed.[9]

Challenges in the implementation of telemedicine included educating patients, developing a technical support network, having a plan B in case of not having access to the Internet, and dealing with health insurance to authorize and reimburse telehealth services.

The COVID-19 pandemic provides an opportunity to adequately establish telemedicine programs that will be maintained in the future as a complement to standard venous care. For countries without telemedicine integrated into their healthcare system, this is a call to adopt the necessary regulatory frameworks to support its wide adoption. For health professionals, it is challenging to conduct more studies to improve telemedicine use and create more evidence-based guidelines.

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REFERENCES

1. Paquette S, Lin JC. Outpatient telemedicine program in vascular surgery reduces patient travel time, cost, and environmental pollutant emissions. Ann Vasc Surg 2019;59:167-72.
2. Aponte-Tinao LA, Farfalli GL, Albergo JI, Plazzotta F, Sommer J, Luna D, et al. Face to face appointment vs. telemedicine in first time appointment orthopedic oncology patients: a cost analysis. Stud Health Technol Inform 2019;264:512-5.
3. Frid SA, Ratti MFG, Pedretti A, Pollan J, Martínez B, Abreu AL, et al. Telemedicine for upper respiratory tract infections during 2018 epidemiological outbreak in South America. Stud Health Technol Inform 2019;264:586-90.
4. Broman KK, Oyefule OO, Phillips SE, Baucom RB, Holzman MD, Sharp KW, et al. Postoperative care using a secure online patient portal: changing the (inter)face of general surgery. J Am Coll Surg 2015;221:1057-66.
5. Lin JC, Crutchfield JM, Zurawski DK, Stevens C. Implementation of a virtual vascular clinic with point-of-care ultrasound in an integrated health care system. J Vasc Surg 2018;68:213-8.
6. Kavousi Y, Al-Adas Z, Crutchfield JM, Karamanos E, Swanson C, Lin JC. Early clinical experience using telemedicine for the management of patients with varicose vein disease. J Telemed Telecare 2019;25:54-8.
7. Lin JC, Mclaughlin D, Zurawski D, Kennedy N, Kabbani L. Comparison of virtual visit versus traditional clinic for management of varicose veins. J Telemed Telecare 2020;26:100-4.
8. Plazzotta F, Sommer JA, Marquez Fosser SN, Luna DR. Asynchronous dermatology teleconsultations using a personal health record. Stud Health Technol Inform 2018;247:690-4.
9. Parsi K, van Rij AM, Meissner MH, Davies AH, Maeseneer M, Gloviczki P, et al. Triage of patients with venous and lymphatic diseases during the COVID-19 pandemic - The Venous and Lymphatic Triage and Acuity Scale (VELTAS): a consensus document of the International Union of Phlebology (UIP), Australasian College of Phlebology (ACP), American Vein and Lymphatic Society (AVLS), American Venous Forum (AVF), European College of Phlebology (ECoP), European Venous Forum (EVF), Interventional Radiology Society of Australasia (IRSA), Latin American Venous Forum, Pan-American Society of Phlebology and Lymphology and the Venous Association of India (VAI). J Vasc Surg Venous Lymphat Disord 2020;8:706-10.

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Computed tomography venography versus intravascular ultrasound in the diagnosis of iliofemoral vein stenosis

In the recent publication "Comparison of computed tomography venography and intravascular ultrasound in screening and classification of iliac vein obstruction in patients with chronic venous disease", Rossi et al[1] demonstrated that computed tomography venography (CTV) was a powerful screening tool for detecting iliac vein obstruction (IVO), even outperforming intravascular ultrasound (IVUS) examination in detecting IVO for six patients with chronic venous disease (CVD). We are puzzled at the high sensitivity of CTV (94%) in ruling out IVO and that lesions missed on IVUS examination may be detected on CTV. In our center, CTV missed a high proportion (96%) of patients with CVD with IVO subsequently detected on IVUS examination.

IVUS examination provides a high-resolution endoluminal imaging superior to ascending venography in the VIDIO trial.[2] In contrast, CTV does not offer the resolution to precisely define the obstruction. Veins traversing horizontally are imaged axial to the body centerline, yielding an elliptical section beyond its true orthogonal area which underestimates the degree of vein stenosis.[3]

Comparing CTV and IVUS examination is challenging. We lack healthy reference vein sizes. The authors compared stenosed veins with, in order of preference, the ipsilateral nonobstructed leg veins, contralateral healthy leg veins, and published anatomic averages (in bilateral disease). Using the patient's healthy vein accounts for interindividual vein size variability. However, veins of patients with CVD are seldom locally diseased. We cannot assume the caudal venous segments or the contralateral leg as healthy references. More concerning is the potential bias with the use of three different reference values in the same study. Whether the type of reference values confounds the degree of IVO needs to be