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.

universally pertinent cut-off values that distinguish HGG from LGG. This is attainable through large-scale multicentre prospective series and dictates the standardisation of the multimodal MRI and SPECT imaging protocols and data processing, to facilitate the reproducibility of the encouraging results obtained so far from single-centre studies.

Declaration of interests

The authors declare no conflict of interest.

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S. Tsiouris*, G.A. Alexiou, M.I. Argyropoulou, A.K. Zikou, L.G. Astrakas, A.D. Fotopoulos
University Hospital of Ioannina, Ioannina, Greece
* Guarantor and correspondent: S. Tsiouris.
E-mail address: spytsi@gmail.com (S. Tsiouris)

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* Guarantor and correspondent: M.P. Wilson.

COVID-19-related cardiac involvement and potential implications for cardiothoracic imaging

Sir

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the causative agent of coronavirus disease 2019 (COVID-19). SARS-CoV-2 is a single-stranded RNA enveloped virus, which uses the ACE2 receptor for cellular adherence.[1] Most imaging features reported to date associated with COVID-19 have focused on lung imaging findings as respiratory symptomatology is most common[2,3]; however, ACE2-expressing cells have been shown to be present in a number of other organs including the myocardium, where nearly 10% of cells demonstrate ACE2 expression.[4] The heart has therefore been identified as a high risk site for SARS-CoV-2 infection, particularly in patients with prior cardiac injury, diabetes mellitus, and/or hypertension treated with ACE inhibitors or angiotensin receptor blockers (ARB) where there may be unregulated ACE2 expression.[4,5] Severe myocarditis has already been reported in patients with COVID-19[6,7] and inflammatory infiltrates in the myocardium have been confirmed on autopsy studies.[8]

The high risk for myocardial involvement in patients with COVID-19 has implications for chest imaging. Firstly, as the number of cases continue to rise, COVID-19 may be an increasingly frequent consideration as a potential cause for viral myocarditis on imaging. Secondly, radiologists should be aware that the number of imaging requests for cardiac imaging in patients with suspected or confirmed COVID-19 are likely to increase in order to explore for potential causes of cardiac injury such as coronary artery disease or myocarditis. Approximately 40% of hospitalised COVID-19 infected patients have coronary artery disease and nearly a quarter of critically ill patients can have cardiac injury.[9] Differentiating between acute coronary syndromes related to systemic disease and primary cardiac injury will be clinically important for management as treatment remains supportive at present time.[7] To this end, a specific review for coronary calcification or occult features of ischaemic heart disease on chest computed tomography (CT) should be undertaken. Cardiac magnetic resonance imaging (MRI) could also be considered in patients with suspected or confirmed COVID-19 and with clinical, biochemical, and/or electrocardiography (ECG) changes suggestive of myocardial injury but without an acute coronary syndrome.

Conflict of interest

The authors declare no conflict of interest

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M.P. Wilson*, R.A. Coulden, G. Low
University of Alberta, Edmonton, Alberta, Canada
* Guarantor and correspondent: M.P. Wilson.
E-mail address: mitch.wilson@ualberta.ca (M.P. Wilson)

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* Guarantor and correspondent: M.P. Wilson.