



CORRECTION

Correction to: Clinical Characteristics and Multisystem Imaging Findings of COVID-19: An Overview for Orthopedic Surgeons

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The published article listed an incorrect credential for Jose Rodriguez, MD. It is corrected here.

The correct article category should be “Response to COVID-19/Review Article.”

The published article also contained two typographic errors in Table 1, neither of which affected the data or findings presented. Table 1 is corrected here.

The online version of the original article can be found at <https://doi.org/10.1007/s11420-020-09775-3>

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Table 1 Summary of reported COVID-19 most common imaging findings to date

Organ system	Imaging findings
Pulmonary manifestations	<p>Plain radiograph (Fig. 1)</p> <ul style="list-style-type: none"> • Consolidation and ground glass opacities (GGO) in a peripheral and lower lobe distribution, with predominately bilateral lung involvement • Pulmonary nodules, pleural effusions, lymphadenopathy, and lung cavitation are usually absent <p>Chest CT findings based on time of illness (Figs. 2, 3, and 4)</p> <p><i>A. Early stage (days 0–4)</i></p> <ul style="list-style-type: none"> • Subpleural unilateral or bilateral GGO • Negative findings possible in minority of patients <p><i>B. Progressive stage (days 5–8)</i></p> <ul style="list-style-type: none"> • Diffuse/multilobe distribution of GGO • Crazy-paving pattern (GGO with superimposed inter- and intralobular septal thickening) • Consolidations without mediastinal lymphadenopathy <p><i>C. Peak stage (days 9–13)</i></p> <ul style="list-style-type: none"> • Worsening GGO diffusion and crazy-paving with residual parenchymal bands • ARDS highly likely during this period <p><i>D. Absorption stage (days 14–resolution)</i></p> <ul style="list-style-type: none"> • GGO may persist, but crazy-paving resolves • Consolidations decrease over time <p>Other associated chest CT findings (Fig. 7)</p> <ul style="list-style-type: none"> • Septal thickening • Pleural thickening • Pericardial effusion • Bronchiectasis • CT Halo sign
Cardiovascular manifestations	<ul style="list-style-type: none"> • Acute pulmonary embolism (screen for deep vein thrombosis on duplex ultrasound) <p>Gadolinium-enhanced cardiac MRI and echocardiographs (Figs. 5 and 6)</p> <ul style="list-style-type: none"> • Acute myopericarditis: curvilinear delayed enhancement in the subepicardial wall and adjacent pericardium • Acute myocardial infarction: delayed transmural enhancement within ventricle • Generalized increase in heart wall thickness • Diffuse biventricular hypokinesia • Severe left ventricular dysfunction • Biventricular myocardial interstitial edema • Pericardial effusion (mostly around the right cardiac chambers)
Musculoskeletal and neurologic manifestations	<p>CT brain (Figs. 8 and 9)</p> <ul style="list-style-type: none"> • Acute large vessel cerebral infarcts (could be thromboembolic in nature) • Acute cerebral hemorrhage • Leukoencephalopathy, including CT hypoattenuation of the bilateral cerebral hemispheric white matter and corpus callosum <p>MRI (with or without IV contrast) (Figs. 10, 11, and 12)</p> <ul style="list-style-type: none"> • Encephalitis with leptomeningeal enhancement • Meningoencephalitis • Guillain-Barré syndrome (GBS) • Acute ischemic stroke with frontotemporal hypoperfusion abnormalities • Intracranial hemorrhage • Cerebral venous thrombosis • Multiple sclerosis plaque exacerbation • Miller-Fisher syndrome

Gastrointestinal manifestations

- Posterior reversible encephalopathy syndrome (PRES)
 - Acute necrotizing encephalopathy (ANE)
 - Leukoencephalopathy with diffuse confluent white matter T2/FLAIR hyperintensities, scattered micro-hemorrhage in the corpus callosum, and posterior circulation hyperperfusion, without diffusion restriction or abnormal enhancement
 - Myositis
- CT and US abdomen (Figs. 13 and 14)
- Small and large bowel wall thickening, due to gastroenteritis or ischemia
 - Bowel and mesenteric infarction and necrosis, with associated non-enhancing bowel, pneumatosis, portal venous gas, and bowel perforation
 - Portal vein thrombosis
 - Distended gallbladder containing sludge suggestive of cholestasis
 - Solid organ inflammation and infarction, including the pancreas (pancreatitis), liver (hepatitis), kidneys, and spleen
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CT computed tomography, *MRI* magnetic resonance imaging