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Role of chest CT in patients with acute abdomen during the COVID-19 era

Editor

Currently doctors, health professionals and medical students are facing a challenging pandemic caused by SARS-CoV-2 (COVID-19). As of 1 April, Italy is the country with the highest number of deaths¹. Gastrointestinal symptoms, such as diarrhoea, may arise before or even in the absence of respiratory symptoms². The relatively high incidence of chest CT changes suggestive of COVID-19 ('ground-glass' opacity) in asymptomatic patients is worth noting. Zhou *et al.*³ reported that 66 of 254 (26.0 per cent) COVID-19-positive patients had gastrointestinal symptoms, with a greater prevalence in female patients (62.8 per cent; $P = 0.033$). A possible

explanation is mainly related to the high expression of angiotensin converting enzyme (ACE) 2 receptors in the alveolar type 2 (AT2) cells of the lungs and also enterocytes. The typical scenario is a bilateral ground glass picture with or without pulmonary consolidation, consistent with viral pneumonia. Other less commonly observed findings were pleural thickening, pleural effusion and lymphadenomegaly. A retrospective analysis of 51 patients demonstrated that sensitivity of cCT in COVID-19 detection may be higher than that of reverse transcription polymerase chain reaction (RT-PCR) (98 versus 71 per cent)⁴.

In this severe acute pandemic scenario, patients who come to the emergency department with acute abdomen must also be considered for COVID-19 infection, even in the absence of respiratory symptoms. In the clinical investigation of this patient, abdominal CT is common for surgical decision-making; adding a cCT seems sensible (*Fig. 1*).

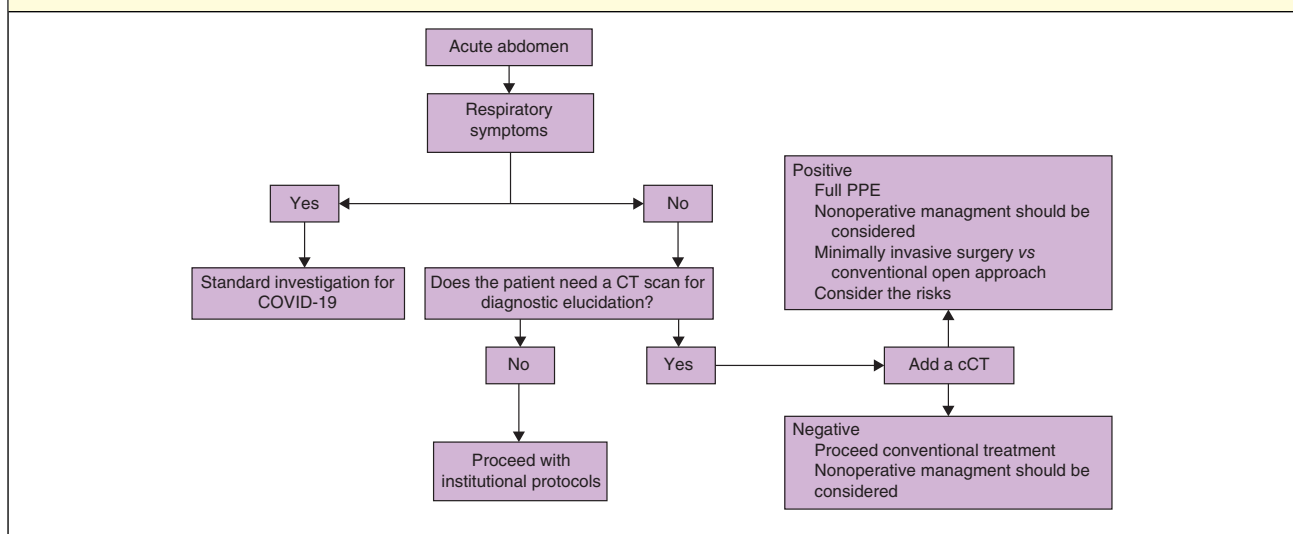
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Fig. 1 Flow chart for acute abdomen cases in emergency settings



PPE, personal protective equipment; cCT, chest CT.