

Seasonal influenza chest CT findings

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Seasonal influenza is a serious public health issue that can cause annual epidemics during winter as well as severe illness and death, in high risk populations.

Chest Computed Tomography (CT) findings of 4 patients hospitalised due to microbiologically confirmed influenza lung disease, in 424 General Military Hospital, during the 2015-2016 season, are shown in the attached pictures. The main imaging findings were bilateral ground glass opacities, with areas of consolidation, as well as crazy paving pattern in 2 cases.

There is limited literature data regarding chest CT findings in patients suffering from lung involvement due to seasonal influenza; more data regarding swine-origin influenza and influenza pandemics (2009) is available. The predominant pattern of pulmonary involvement due to influenza virus is that of multifocal ground glass attenuation opacities, with or without consolidation areas, distributed bilaterally, peribronchovascularly and subpleurally¹⁻³.

As a result, seasonal influenza, severe acute respiratory syndrome (SARS) and organising pneumonia share common features in chest CT scan; on the other hand these findings differ largely from those of pneumococcal pneumonia (typically consolidation and mucoid impaction¹). It is noteworthy that ground glass opacities were found in almost 100% of patients with lung involvement due to swine-origin influenza, whereas consolidation was present in less than 2/3 of patients¹. This observation has even led to the hypothesis that the presence of consolidation in patients with influenza lung disease may imply the presence of concurrent bacterial superimposed infection⁴.

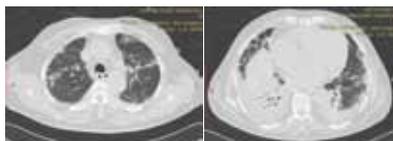


FIGURE 1,2. 1st case: 69-year-old patient with history of coronary disease. ICU admission due to serious respiratory failure, resulting from influenza virus disease, with favorable clinical outcome.

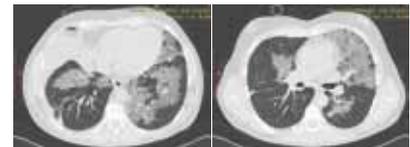


FIGURE 3,4. 2nd case: 50-year-old patient hospitalized due to acute myocardial infarction presented with fever a few days after his exit from the cardiology department. Favorable clinical outcome.

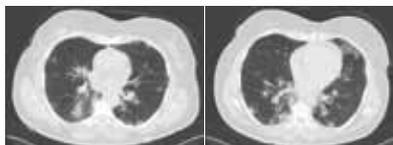


FIGURE 5,6. 3rd case: 46-year-old female patient, elevated BMI. Mild respiratory failure, favorable clinical outcome.

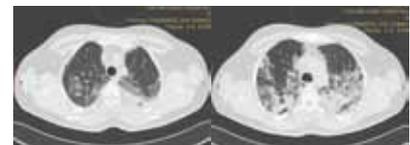


FIGURE 7,8: 4rd case: 47 year-old-patient, without predisposing factors. Severe respiratory failure with favorable clinical outcome.

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