Chest Radiograph (cxr) Manifestations of the novel Coronavirus Disease 2019 (covid-19) — a Mini-review

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Abstract *Background***:** Coronavirus disease 2019 (COVID-19) is highly contagious and has claimed more than one million lives, besides causing hardship and disruptions. The Fleischner Society has recommended chest X-ray (CXR) in detecting cases with high risk for disease progression, for triaging suspected patients with moderate-to-severe illness, and to eliminate false negatives in areas with high pre-test probability or limited resources. Although CXR is less sensitive than real-time reverse transcription polymerase chain reaction (RT-PCR) in detecting mild COVID-19, it is nevertheless useful because of equipment portability, low cost and practicality in serial assessments of disease progression among hospitalized patients.

*Objective***:** This study aims to review the typical and relatively atypical CXR manifestations of COVID-19 pneumonia in a tertiary care hospital.

*Methods***:** The CXRs of 136 COVID-19 patients confirmed through real-time RT-PCR from March to May 2020 were reviewed. Literature search was performed using PubMed.

*Results***:** A total of 54 patients had abnormal CXR whilst the others were normal. Typical CXR findings included pulmonary consolidation or ground-glass opacities in a multifocal, bilateral peripheral or lower zone distribution, whereas atypical CXR features comprised cavitation and pleural effusion.

*Conclusion***:** Typical findings of COVID-19 infection in chest computed tomography studies can also be seen in CXR. The presence of atypical features is associated with worse disease outcome. Recognition of these features on CXR will improve accuracy and speed of diagnosing COVID-19 patients.

Keywords: COVID-19, CXR, pneumonia, ground-glass opacity, consolidation, peripheral, ARDS.

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