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A spectrum of chest radiographic patterns in COVID patients.

Devta Viswam

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Title: A spectrum of chest radiographic patterns in COVID patients.

Authors list :

Dr.Ajit Mahale(Professor)

Dr.Devta Viswam(postgraduate student)

Dr.Sonali Ullal(Associate professor)

Dr.Merwyn Fernandas(Associate professor)

Dr Sonali D Prabhu (Associate professor)

ABSTRACT:

Introduction:

Imaging plays an important role in the diagnosis and management of COVID 19 pneumonia. Chest X-ray is the first imaging technique that is done and plays an important role in the diagnosis of COVID-19 disease and also helps to complete differential diagnosis of respiratory symptoms, such as cough and dyspnea.

The chest radiograph can establish the presence of pneumonia, define its extension and location, and can also diagnose complications. However limited information exists regarding chest X-ray imaging findings of SARS-CoV-2 lung infection

Aims:

- To describe the various patterns of chest involvement in chest radiograph of patients tested positive for COVID 19.

Results:

Chest radiography of 376 patients tested positive for SARS-CoV-2 were studied and eight patterns of lung parenchymal involvement were found. The eight patterns of involvement are:

Perihilar radioopacities with reverse batwing pattern Multifocal lower lobe dense opacities s/o consolidation Peribronchial rounded opacities s/o consolidations Multifocal bilateral opacities s/o consolidations Ball pattern or round opacity s/o pneumonia Bilateral symmetrical diffuse dense opacities –probable consolidation Diffuse ground glass haziness in any area of lung field Solitary focal or diffuse area of consolidation in lung field

Out of the 376 radiographs that were studied,3.7% had Perihilar radioopacities with reverse batwing pattern,3.5% had Multifocal lower lobe dense opacities s/o consolidation,2.1% had Peribronchial rounded opacities s/o consolidations,3.7% had Multifocal bilateral opacities s/o consolidations,0.3% had Ball pattern or round opacity s/o pneumonia,2.7% had bilateral symmetrical diffuse dense opacities –probable consolidation,27.9% had Diffuse ground glass haziness in any area of lung field and 10.1% had Solitary focal or diffuse area of consolidation in lung field. One or more combination of findings/pattern were seen in majority of the patients with lung involvement.

Conclusion:

We described the patterns of involvement of lung parenchyma in covid-19 pneumonia on chest radiograph and can be used as a screening to detect early cases . CXR is easily available and inexpensive screening procedure that can also be used to monitor the disease progress.