

22. THE ROLE OF COMPUTED TOMOGRAPHY IN THE EVALUATION OF PATIENTS WITH COVID-19

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Introduction. The coronavirus disease 2019 (COVID-19) is effectively controlled but the number of confirmed cases and deaths remains high globally. At present, computed tomography (CT) is widely used to examine lung diseases, which can provide intuitive image data for clinical diagnosis.

Aim of study. To perform an analysis of the literature for the imaging findings and the role of computed tomography in the evaluation of patients with COVID-19.

Methods and materials. A literature review of the imaging findings on computed tomography in COVID-19 using a search of full-text articles on PubMed (MEDLINE), using the relevant keywords.

Results. According to the literature, CT characteristic images are different in different stages of COVID-19. The early stage of COVID-19 is usually 1 to 3 days after clinical manifestations. CT shows that the lesions are single, double, or scattered with limited ground-glass opacity, bronchial wall thickening, air bronchus sign, or honeycomb-like or grid-like thickening of the interlobular septa, resembling a fine grid-like shadow or crazy paving sign. The clinical manifestations advance after 3 to 7 days. CT images show that the lesions increase and expand in scope, and the direction is often parallel to the direction of the pleura. Consolidation of different sizes and degrees occurs in the lesions, and some air bronchograms are visible. The CT manifestations of new lesions in this period were similar to those of early lesions. In the severe outbreak period, clinical symptoms typically appear for 7 to 14 days, with diffuse lesions or consolidation in both lungs, and most of the lungs are involved in the appearance of the white lung. In the absorption period of the outcome, after 2 to 3 weeks of treatment, the number and scope of the lesions were reduced, and the density was reduced. Some lesions had manifested as patchy shadows or fibrotic irregular cord-like shadows, and the thickening of the bronchial and vascular bundles was reduced.

Conclusion. Computed tomography (CT) is widely used in the evaluation of patients with COVID-19 and provides important imaging data for the clinical and differential diagnosis, staging, and later help in the effective treatment of COVID-19.