

Advisory on Rational Use of HRCT imaging in Patients with COVID-19

MOHFW, AIIMS and ICMR have jointly issued treatment guidelines for Covid-19 patients in the form of a guidance/ algorithm on 23.4.2021 available at: <https://www.mohfw.gov.in/pdf/COVID19ManagementAlgorithm22042021v1.pdf>. This guidance/ algorithm is easy to understand, practice and is widely followed. But this guidance/ algorithm does not prevent misuse/ overuse of HRCT Scan as an investigation tool in Covid – 19 patients.

The purpose of this advisory is to stop the irrational use/ over use of HRCT Scan as an investigation tool in Covid – 19 patients. For this reason, Joint Monitoring Group under Chairmanship of DGHS took into account the following facts:

High-resolution CT (HRCT) scan of chest provides better visualization of the extent and nature of lung involvement in patients with Covid - 19. However, any such additional information gained from HRCT scan of chest often has little impact on treatment decisions. At present, treatment decisions are based almost entirely on clinical severity and physiological impairment. Therefore, treating physicians should be highly selective in ordering HRCT imaging of Chest in patients of Covid - 19.

Why routine HRCT imaging of chest in Covid – 19 patients is NOT recommended:

- Nearly two-thirds of persons with asymptomatic Covid - 19 have abnormalities on HRCT chest imaging which are non specific. Most of them do not progress clinically.
- HRCT imaging of chest done in the first week of illness might often underestimate the extent of lung involvement, giving a false-sense of security.
- Correlation between extent of lung involvement by HRCT imaging of chest and hypoxia is imperfect. Often, young individuals with extensive lung involvement will not develop hypoxia, while elderly individuals with minimal/ less extensive lung involvement are likely to develop hypoxia.
- Radiation exposure with unnecessary HRCT imaging may be associated with risk of cancer later in life.

Situations when HRCT imaging of Chest should not be done:

- HRCT scan chest should not be done for the purpose of diagnosing/ screening Covid-19 infection. Diagnosis of Covid-19 should be done only by using approved laboratory tests (RT – PCR Test) as recommended by the ICMR.
- It is not indicated in persons with asymptomatic Covid -19.
- It is not required to initiate treatment in Covid-19 patients with hypoxia and an abnormal chest radiograph.
- It is not required to assess response to treatment. More often, the lung lesions show radiological progression despite clinical improvement.

Appropriate indications for HRCT imaging of chest in Covid – 19 patients:¹

- Suspect/ confirmed case of moderate Covid – 19 who continue to deteriorate clinically even after initiation of appropriate therapy.
- Treating Physician/ Intensivist may consider HRCT chest depending on clinical assessment of the patient.

In view of the above, treating physicians should exercise caution while advising HRCT imaging of chest.

Reference:

1. WHO/2019-nCoV/Clinical/Radiology_imaging/2020.1