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[COVID-19] Procedure Precautions When Using MRI Imaging [ECRI Exclusive Hazard Report]		

Problem

1. Patients with COVID-19 could require an MRI scan for non-COVID-19 related conditions.
2. Use of the MR suite without proper precautions may lead to contamination of the scanner, coil, and/or the room.
3. Without proper precautions, there is a high risk of patient cross-contamination and staff contamination.

ECRI Recommendations:

1. When taking patients with COVID-19 to the MRI scanner:
 1. Define clean and dirty areas.
 1. MRI room must be considered a dirty area.
 2. If the entrance to the control section (clean area) is next to the entrance to the MRI room, consider using a transparent barrier to separate the environments.
 2. MRI suite staff should be trained in COVID-19-appropriate cleaning and disinfecting procedures.
 3. All coils and accessories must be covered if they are on shelves. Consider removing all coils and accessories from the MRI room while they are not in use.
 4. If possible, use a detachable table and perform all patient setup procedures outside the MRI area (this includes the control section), so the patient spends less time in the MRI room.
 5. The patient should be covered and wearing a mask before going into the MRI room.
 6. The coils, patient table, and gantry must be cleaned and disinfected in between patients.
 7. The time between patients should be enough to allow for a complete room air exchange between patients.
 8. Follow the manufacturer recommendations for cleaning and disinfecting, and use disinfectant agents defined [here](#). Ensure that all surfaces remain wet for the contact time specified on the product label.

Background:

1. Patients with COVID-19 may have MRI imaging exams that are either related or unrelated to COVID-19.
2. MRI imaging could help to assess cytokine syndrome in the brain. Early research shows that MRI images of a COVID-19 patient were able to display acute hemorrhagic necrotizing encephalopathy. (Radiology, March 31, 2020)
3. COVID-19 patients could be symptomatic or asymptomatic.
4. Even when asymptomatic, patients can be contagious and exhale droplets and aerosol that will contaminate the coils, table, magnet, and MRI room.
5. Room air exchange is essential to remove contaminated air.
6. COVID-19 has been found to have a long life-span on surfaces (2 to 3 days for plastic).

References:

- N Poyiadji, G Shahin, D Noujaim, et al. (2020, March 31). COVID-19–associated Acute Hemorrhagic Necrotizing Encephalopathy: CT and MRI Features. Retrieved from: <https://pubs.rsna.org/doi/10.1148/radiol.2020201187>

UMDNS Term(s)

Magnetic Resonance Imaging Coils, Surface [17542]
 Scanning Systems, Magnetic Resonance Imaging, Full-Body [18108]

Geographic Region(s)

Worldwide

Suggested Distribution

Clinical/Biomedical Engineering, Emergency/Outpatient Services, Infection Control, Nursing, Pulmonology/Respiratory Therapy, Diagnostic Imaging, Radiation Oncology/Medical Physics, Staff Education

Comment

- This alert is a living document and may be updated when ECRI receives additional information.