

Regional Mechanical Thrombectomy Imaging Protocol in Patients Presenting with Acute Ischaemic Stroke during the COVID-19 Pandemic



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Introduction

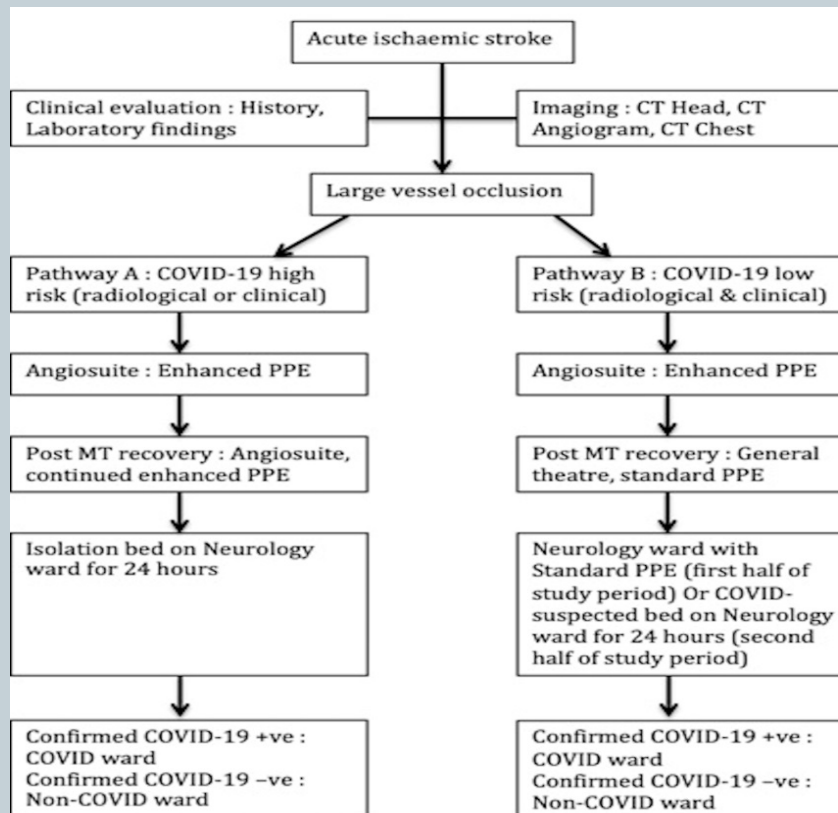


- To describe the feasibility & interim outcome of implementing a modified acute stroke imaging algorithm for COVID-19 risk stratification across a regional network of primary stroke centres (PSC)

Methods



- Retrospective review between 14 April to 21 May 2020
- Imaging protocol (+ CT Chest) & patient pathway



Results (1)



- 49 MT referrals, performed 13 MTs
- Overall sensitivity (100%), specificity (74.1%), NPV (100%) & PPV (22.2%) of CT Chest vs RT-PCR
- Mean additional time & radiation dose for CT Chest : 184 +/- 65.5(SD) seconds & 2.47 +/- 1.03(SD) mSv

| | RT-PCR +ve | RT-PCR -ve |
|--------------|---------------------------------|----------------------------------|
| Chest CT +ve | 2 ^a / 0 ^b | 6 ^a / 1 ^b |
| Chest CT -ve | 0 ^a / 0 ^b | 8 ^a / 12 ^b |

Table 1 : Correlation between CT Chest & RT-PCR swab results for diagnosing COVID-19 pneumonia. 'a' denotes clinical suspicion and 'b' denotes asymptomatic for COVID-19 pneumonia

Results (2)



| Incidental pulmonary/CVS findings of significant clinical relevance (n=patients) | Incidental pulmonary/CVS findings of indeterminate clinical relevance (n=patients) |
|--|--|
| Lung malignancy / suspicious nodule (2) | Emphysema (4) |
| Pulmonary oedema (4) | Lung fibrosis/pneumoconiosis (3) |
| Left ventricular thrombus/aneurysm (2) | Ascending aortic dilatation (2) |
| Left atrial dilatation: anterior-posterior diameter >45mm (16) | |

Table 2 : List of incidental findings identified on review of the thoracic imaging by a Cardiothoracic Radiologist in this cohort, summarized according to their clinical relevance.

Discussion & Conclusion



- Chest CT provides a pragmatic, rapid additional tool for COVID-19 risk stratification for MT referrals
- Enabled efficient use of hospital resources with minimal compromise or delay to the overall patient journey
- Prevalence of incidental thoracic findings of clinical relevance may be of benefit in the decision making for future MT referrals & post procedural care