Dear Colleagues

There have been a lot of discussions in the last week on how we should use Imaging in patients suspected of having Covid 19 in the 2nd wave.

I am writing to update you on the position we are recommending at BSUH. It is in line with the recently published BSTI guidance.

https://www.bsti.org.uk/covid-19-resources/covid-19-statement-october-2020/

As you will all recall in the first wave we created a "suspected Covid CXR pathway" and used a Coded CXR pathway (Codes 1-3), with normal/indeterminate CXRs going on to have a CT scan if felt to be appropriate. The reason we started the pathway was because of early published data from China and the Diamond Princess cruise ship suggesting the negative predictive value of a normal CT scan was over 90%. In those days, everywhere was struggling to get PCR tests quickly, and patients could not stay in red zones whilst awaiting a decision. The idea was that CT could therefore be used to help triage patients into green areas from A/E.

We have analysed our data from the first wave. We never achieved close to 90%. At the height of the pandemic in March when 45% of patients who entered the "suspected Covid CXR pathway" were subsequently PCR positive, the negative predictive value of a normal CT scan was between 73 and 86%. Subsequent published studies from elsewhere have also never achieved 90%. The negative predictive of CXR alone (87-90%) here at BSUH performed better than CXR and CT scanning combined did! This was because of the high number of indeterminate CT scans. So adding CT scanning to the pathway actually worsened our negative predictive value compared to CXR alone! This is clear evidence that CT does NOT add improved decision making to the usual pathway of clinical assessment, WCC and CXR in improving negative predictive value for triage of patients whilst awaiting PCR.

So in any 2nd wave, we should not be accepting CT requests "to exclude Covid" when CXR is normal/indeterminate.

I would suggest we continue to provide a prompt service to A/E with worded/descriptive CXR reports (not coded).

We should reserve CT scanning for the usual problem solving issues for example ? pulmonary emboli ; or in severely unwell patients with widespread airspace disease who are not responding to therapy (eg after a week in ITU on a ventilator) when we need to know if the lungs are developing signs of fibrosis.

I hope this clarifies matters. Feel free to call me if unsure about anything.

Nigel

Dr Nigel Marchbank MRCP FRCR
Consultant Radiologist

Department of Radiology
Royal Sussex County Hospital
Eastern Road
Brighton
BN2 5BE

Tel: 01273 696955 x7545

PA Rebecca Steen on x67570