The Royal College of Pathologists
Pathology: the science behind the cure

Review of COVID-19-related post mortems submitted through the RCPath portal

21 May 2020

This document contains the initial findings of an RCPath-led review of post-mortem reports submitted to the College via our post-mortem portal. It is accompanied by a findings dataset, which can be found on the RCPath website at www.rcpath.org/profession/coronavirus-resource-hub/covid-19-post-mortem-portal.html (member login required to download).

Please share the findings in this document and the dataset with your clinical colleagues, as we have produced this resource at their request.

The following key points are taken from very preliminary data based on a limited number of reports received. We are receiving more post-mortem reports all the time, which we will add in batches to our portal dataset. The more reports we can include, the better the quality of data we can assimilate. The data has not yet been formally interrogated. This will occur in due course when we feel all reports available have been submitted.

Please continue to submit your reports and ask your colleagues to do the same.

Key points

- These data support the prevailing picture that if a patient is not elderly, risk factors such as obesity, autoimmune disease (especially if on biological agents), cirrhosis and psychiatric disease seem an important determinant of poor outcome. It is important to note that with psychiatric disease the circumstances surrounding the death are perhaps more likely to lead to a post-mortem examination by the coroner than in non-psychiatric deaths, so there needs to be clarification of this data.

- Cough, fever, myalgia and shortness of breath appear to be important alerting signs/symptoms for the possibility of COVID-19 infection at autopsy. Myalgia is the least commonly reported. About 20% of patients had none of the above listed, but it is unclear if this is due to omission or exclusion.

- COVID-19 testing at autopsy shows enough positivity to be worth doing routinely (local testing capacity allowing). The virus can be detected by post-mortem swab up to 13 days after death.

- The histopathological change of hyaline membranes within the lungs is almost universal (89%).

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- The second most common histopathological change is an interstitial lymphocytic infiltrate (67%).

- Thrombosis is well documented in many papers and is seen in some cases reported here, though perhaps less than would be expected. However, the sample size is small and it will be interesting to see if the incidence of this finding alters with a larger pool of cases.