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COVID-19 viral expulsion through chest drains

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Editor – We thank Akhtar *et al* for their very timely article on aerosol dissemination through a pleural drain bottle.[1] We completely agree with their conclusion that further work in this field is required and would like to point out complementary work by Duffy *et al* which showed that aerosol emissions increased with increased air flow, with the largest increase observed in smaller particles (0.3–3 microns).[2] A bubbling chest drain thus generates aerosols and a viral filter reduces the aerosols. Pleural fluid has been shown to be positive for SARS-CoV-2 in a post-mortem series and data are lacking from the cases but it seems effusions developed due to other causes rather than the viral infection.[3] The above evidence is currently reflected in the British Thoracic Society that bubbling drains in patients should have droplet exposure minimised by connecting any chest drain to wall suction to create a closed system, applying the described filter or using a digital suction device.[4] The Acute Care Surgery and Critical Care Committees have produced a clear algorithm for chest drain insertion and there is now enough evidence for this to be widely implemented.[5] Locally, this has been adopted with the emergency team only performing chest drains in the department for emergency cases (trauma or tension pneumothorax) and that patients are being moved to a respiratory ward to wait for their SARS-CoV-2 swab to be available before a chest drain is performed. Our current time for a swab is approximately 4 hours (45 minutes for a fast-track swab) and so far, there has been no excess mortality or morbidity to waiting for a swab result. We have plans in place to perform therapeutic aspirations if a procedure is required for symptom relief if the patient cannot wait. ■

AVINASH AUJAYEB
Consultant in respiratory and acute medicine, Northumbria Healthcare NHS Foundation Trust, Cramlington, UK

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