


'Pleural Triage' facilitates effective management of a pleural service in the COVID-19 era

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Abstract

The COVID-19 pandemic has created new challenges for management of pleural diseases. As resources and staff have been redirected to manage acutely unwell COVID-19 patients, routine medical practice and service provision for pleural diseases have been severely disrupted. We recognised the impact this had for patients with pleural diseases, who can be highly vulnerable to infection and often have conditions for which treatment cannot be safely delayed. The pleural service was reviewed in a tertiary centre, focusing on the changes that allowed maintenance of a service whilst maximising patient and staff safety, with the aim that these service transformations can be adopted elsewhere to improve care for pleural patients during and beyond COVID-19.

Keywords

COVID-19, malignancy, pleural, ambulatory, triage

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Introduction

Delivery of almost every aspect of care in hospitals has been disrupted and fundamentally reorganised due to the COVID-19 pandemic. This has also meant significant disruptions to the provision of pleural and lung cancer services with guidelines being consistently updated to reflect the ever-changing landscape of this pandemic. We reviewed the service in a UK tertiary centre to facilitate safe and effective pleural practice while maintaining patient and staff safety.

Guidelines on pleural services during the COVID-19 pandemic

The British Thoracic Society (BTS) COVID-19 recommendations¹ advocate continued provision of diagnostic pathways for patients with suspected cancer, to minimise hospital visits and admissions and ensure patient and staff

safety. Patients with symptomatic malignant pleural effusions are recommended to have either large-volume therapeutic aspirations or first-line indwelling pleural catheters (IPC), hence avoiding the need for admission for chest drain and talc pleurodesis. Whenever possible, family members should be trained to drain the IPCs, thus minimising the risks posed by multiple district nurses visits. Patients with suspected cancer who are candidates for anti-cancer therapy are recommended to have day-case medical thoracoscopy with/without an IPC or image-guided pleural biopsies depending on local expertise.

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Patients with primary spontaneous pneumothoraces are recommended to be treated on an ambulatory pathway with a pleural vent or Heimlich device. Inpatients requiring chest drain are recommended to be connected to a viral filter and either wall suction or a digital drainage system (e.g. Thopaz) to create a closed circuit.¹

Our pleural service

Our pleural service includes a weekly pleural clinic seeing approximately 25 patients, a 25-bedded pleural/cancer-themed respiratory ward with a procedure room, a weekly thoracoscopy list, a daily IPC service and a pleural nurse specialist (PNS) led clinic and daily review service. The service is undertaking approximately 500 chest drains, 50–60 thorascopies and 75–100 IPCs a year. The pleural team comprises two respiratory consultants, a pleural fellow, a dedicated PNS and a pleural service co-ordinator. The PNS also runs a dedicated pleural telephone and email helpline for patients and district nurses as well as the ambulatory pneumothorax service.

Pleural service during the COVID-19 pandemic

At the start of the pandemic, we reviewed our pleural service to incorporate BTS guidance and adapted our existing Pleural Triage multi-disciplinary (MDT) meeting. The Pleural Triage MDT reviews all referrals via an email

pleural mailbox and streams to (1) telephone consultation only, (2) remote chest radiograph (CXR) close to the patients' home 24 h pre-clinic plus telephone consultation or (3) face-to-face (F2F) review or direct to a procedure (Figure 1). The Pleural Triage MDT takes place 2 days prior to the pleural clinic to allow time to call patients and arrange for their remote CXR and chase other relevant investigations.

The triage MDT is attended by a pleural consultant, pleural fellow, our pleural nurse specialist and the service co-ordinator. We work closely with the Lung Cancer MDT and Triage service to streamline patient care and avoid repeated hospital visits. At MDT, all relevant imaging and pathology reports are reviewed. Where this is not available, we expedite this via our cytopathologist or radiologist to ensure that all patients attending clinic have the relevant information to direct a management plan.

We implement outpatient pleural management. Between March 2020 and February 2021, there were 819 consultations, with 191 being telephone consults only, 331 remote CXR and telephone consults, and 297 F2F. Prior to the pandemic, all these patients would have attended clinic F2F. Patients were screened for COVID-19 symptoms if attending for CXR/F2F. F2F consults were held in a designated outpatient area with close access to CXR and procedure rooms, with timings to maintain social distancing. If required, definitive pleural intervention was undertaken on the same visit. Direct-to-procedure pathways for thoracoscopy or IPC were implemented with COVID-19 testing 48 h prior.

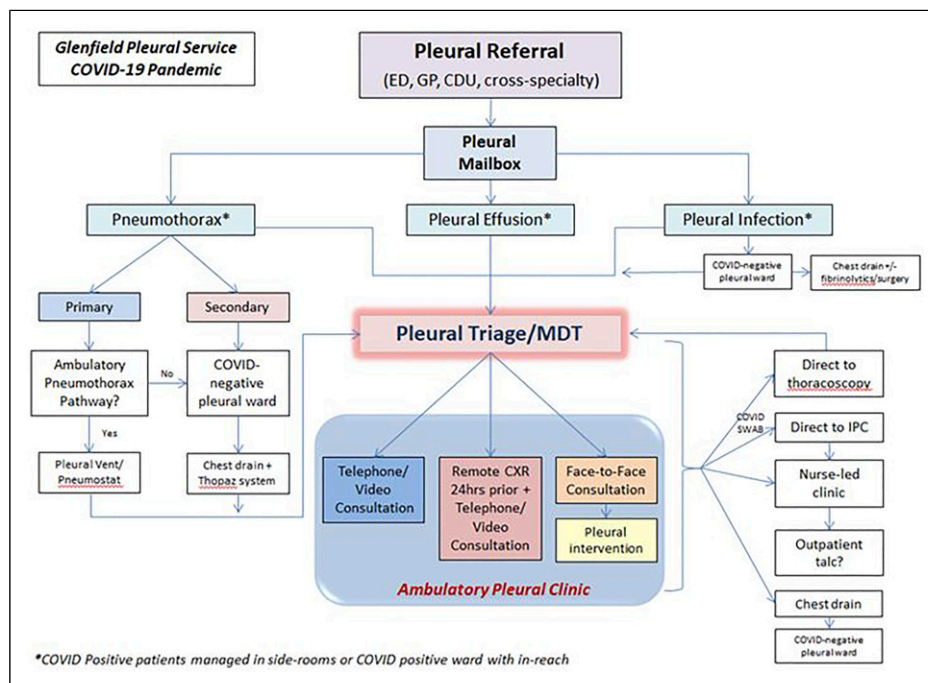


Figure 1. Glenfield pleural service during the COVID-19 pandemic.

The service has been offering IPC as first line for management of effusions for the last few years. In 2019, 53% of 77 patients that underwent an IPC selected it as a first-line procedure. Previously, all these patients would have had a median 4.08-day length of stay for a chest drain +/- pleurodesis, thus saving 167 bed days.² Between January 2020 and February 2021, first-line IPC insertions have been approximately 7% higher at 59% of 112 IPC insertions with 28% of family members/carers being trained by the PNS to drain the IPC themselves compared to only 13% in 2019. This represents a two-fold increase and has reduced unnecessary district nurse visits which are often three times per week. Patient/carer education involves written information about IPCs, how to drain and record the output, dressing application and keeping the drain clean and possible complications to look out for. They are also signposted to mypleuraleffusionjourney.com³ to help guide them through the various treatment options available. A CXR is performed post IPC insertion to ensure correct placement but follow-up imaging is not usually required unless a complication arises, for example, the IPC being blocked. In instances such as this, the patient contacts the PNS who will then arrange an appointment for thoracic ultrasound and troubleshooting.

The PNS helpline receives 15–20 troubleshooting calls/emails per week, which further helps to avoid emergency presentation of these vulnerable patients to primary and secondary care. Patient experience surveys for 2019/2020 reveal that 93% of 228 respondents would rate our pleural service as very good/good and recommend it to their friends and family.

Pleural services during the COVID-19 endemic phase and beyond

The COVID-19 pandemic has resulted in the adoption of many new ways of working. The question is, which of these will continue to be implemented when this is all over? We feel the era of virtual/telephone consults with or without remotely performed radiology may well be here to stay for some aspects of pleural care (e.g. pneumothorax follow-up). Traditionally, all these patients would have been seen F2F in the pleural clinic. The pandemic has likely accelerated changes that were already happening with more emphasis

on virtual consultations. It allows safe patient care and is often as effective as a physical appointment. Drawbacks of remote consultations are the inability to perform physical examination or a thoracic ultrasound to assess the lung and pleura. This is however mitigated by carefully selecting patients during the pleural triage and only performing remote consultations if safe to do so.

Conclusion

A pleural triage MDT can be implemented in well-prepared tertiary centres safely and effectively and is likely to be relevant to healthcare settings across the world. Our Pleural Triage has enabled us to continue to deliver safe and effective patient care throughout the pandemic with emphasis on ambulatory and outpatient management and direct-to-procedure pathways as recommended by the current guidance.

Declaration of conflicting interests

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