

Mediastinal germ cell tumour during the COVID-19 pandemic

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DESCRIPTION

A 23-year-old male accountant with no comorbidities developed a cough and dyspnoea while travelling for work in the UK during March 2020. His symptoms developed over 2 weeks and having contacted a local primary care office, he was referred to a COVID-19 test centre. A swab was not performed as he was considered to be young and in a low-risk category. He was advised to take analgesia, bed rest and self-isolate.

On returning to Ireland, he was required to self-isolate for a further 14 days. Five weeks and three negative swabs later, his symptoms deteriorated with pleuritic chest pain and a severe cough. His primary care physician requested a plain chest radiograph, which demonstrated a large mass within the right hemithorax (figure 1).

On admission to hospital, he did not require oxygen and was haemodynamically stable. A CT of the thorax, abdomen and pelvis showed a 10×11 cm mass arising in the anterior mediastinum with marked stenosis of the superior vena cava and the pulmonary artery trunk (figure 2). No distant metastatic disease was identified confirming clinical stage II disease.¹ Testicular examination and ultrasound were unremarkable. Histological evaluation of the mediastinal lesion confirmed an extragonadal germ cell tumour, of yolk sac origin, with a serum alpha-fetoprotein level of 17 000 ng/mL (0.9–8.8 ng/mL). Other blood tests included an elevated lactate dehydrogenase of 699 unit/L (220–450



Figure 2 A coronal CT image of the thorax demonstrating a right-sided 10×11 cm mass arising from the anterior mediastinum causing mass effect.

unit/L) and an undetectable beta-human chorionic gonadotropin (<1 unit/L).

According to the International Germ Cell Cancer Consensus Group, this represented poor-risk disease due to the mediastinal origin.² Urgent chemotherapy was commenced as an inpatient with the regimen VIP, a 21-day cycle consisting of etoposide (75 mg/m², days 1–5), ifosfamide (1200 mg/m² with mesna days 1–5) and cisplatin (20 mg/m², days 1–5). Pegfilgrastim was administered to reduce the risk of neutropenia. He was discharged after completing the first of four cycles. Depending on the response on conclusion

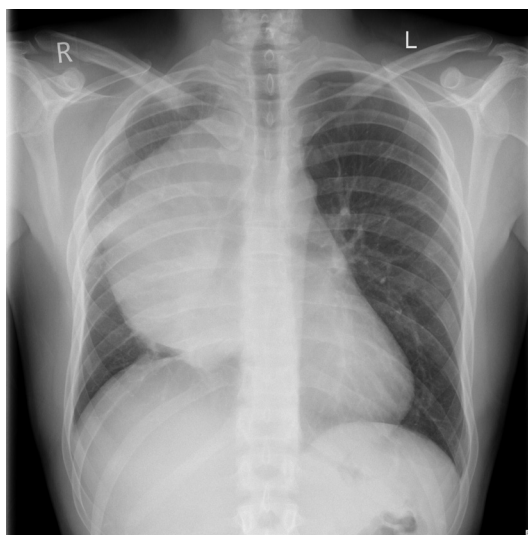


Figure 1 A plain chest radiograph demonstrating a large, well-circumscribed opacification within the right hemithorax.

Patient's perspective

I had a continuous chesty cough, which was hard to get rid of. One month before diagnosis, I had symptoms of COVID-19, including high temperatures, severe shortness of breath and a very intense dry chesty cough. The agonising chest pain also returned at this time, which I was told was likely to be muscular pain resulting from the coughing. I appeared to have recovered from this after 2 weeks with no medical attention. I was left with shortness of breath and a cough, which got worse in the time leading up to admission and it often resulted in me vomiting just from the intensity of the cough. The cough went away within days of starting chemotherapy and I noticed a sensation which felt like some of my airways which had been impeded were opening again. I would not have had lung problems before this and would have considered myself to be quite fit.

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of chemotherapy, it is likely he will require surgery to resect any residual disease.

Extragenital germ cell tumours are rare and carry a worse prognosis than those of testicular origin.³ Regarding pathogenesis, it is not known whether they represent primordial germ cells that failed to migrate to the testis during embryogenesis or if, in fact, they are germ cells that undergo reverse migration from the testis.

Our case also highlights a concern regarding the deprioritisation of certain healthcare services during the COVID-19 pandemic.⁴ Delayed cancer diagnoses may result in increased

cancer-related mortality and increased demand on an already stretched healthcare service.

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Learning points

- ▶ From virtual clinics to social distancing, the COVID-19 pandemic has radically changed the way we practice medicine and in the midst of this change, we must retain a sound medical judgement and remember that 'it is not always COVID-19'.
- ▶ Cancer diagnoses are likely to be delayed during the COVID-19 pandemic leading to more advanced disease at presentation.

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