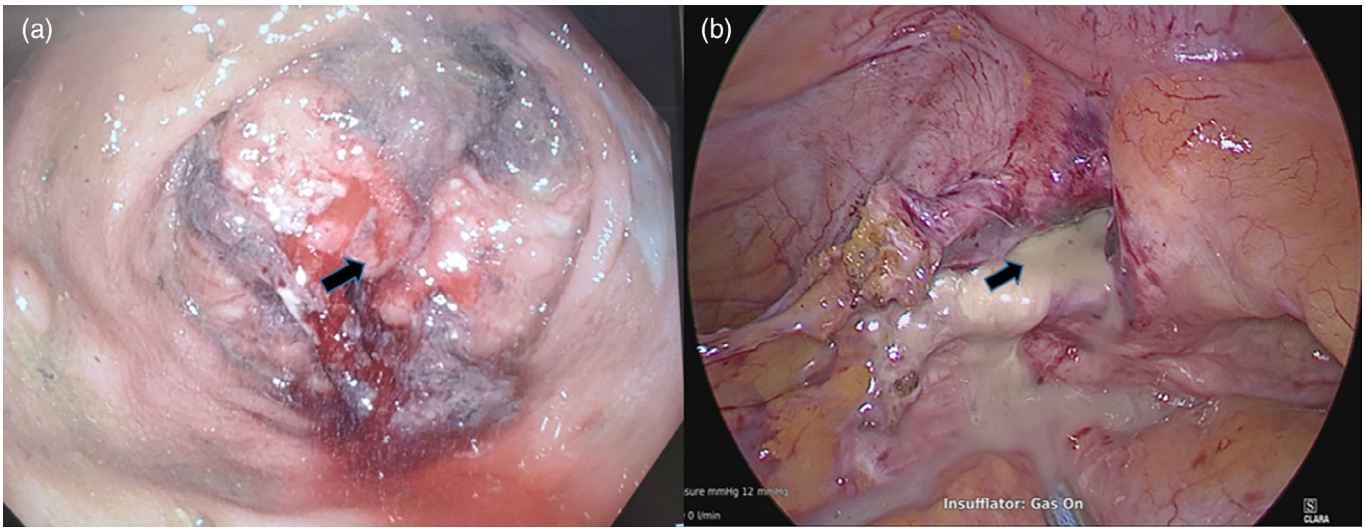

Fig 3. (a) Colonoscopic image of the circumferential partially obstructing rectal mass (black arrow). (b) Laparoscopic image which shows purulent discharge from the left inguinal canal following partial mobilization of the sigmoid colon (black arrow).

Once a local perforation is established, rapid invasion of fascial planes may track along the path of least resistance, most commonly the urogenital tract and perineal tissues. Interestingly, our patient had scrotal invasion extending through the left inguinal canal manifesting as an inguinal lump, which could have been mistaken for an incarcerated inguino-scrotal hernia.

Operative intervention in the acute setting involves extensive debridement of necrotic tissues with subsequent staged debridement and delayed wound closure or graft repair. Despite the extensive tissue necrosis, testicular involvement is uncommon due to the gonadal vascular supply.[5] Faecal diversion via a defunctioning colostomy is recommended during initial surgery to aid with wound healing.[6]

In this case, laparoscopy was performed to assess intra-abdominal involvement prior to scrotal debridement and loop colostomy formation in anticipation of potential obstruction due to his advanced circumferential rectal cancer and need for down-staging neoadjuvant chemo-radiotherapy. Purulent discharge from the deep inguinal ring, in the absence of a hernia, unmasked a large inguinal collection tracking along the canal down to the scrotum that had originated from the perforated rectal cancer.

The COVID-19 pandemic is almost certain to have contributed to the severity of this case and it is very likely that any similar delayed presentation, with other medico-surgical pathologies, will continue to cause significant collateral damage.

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Delayed presentation of breast necrotising fasciitis due to COVID-19 anxiety

A 47-year-old lady presented to the emergency department via ambulance with a month-long history of worsening right breast cellulitis and discharge from a periareolar abscess. Her significant past history included a breast abscess managed conservatively two years prior, body mass index of 44 kg/m^2, autoimmune vasculitis for which she was taking long-term low-dose prednisolone. She was

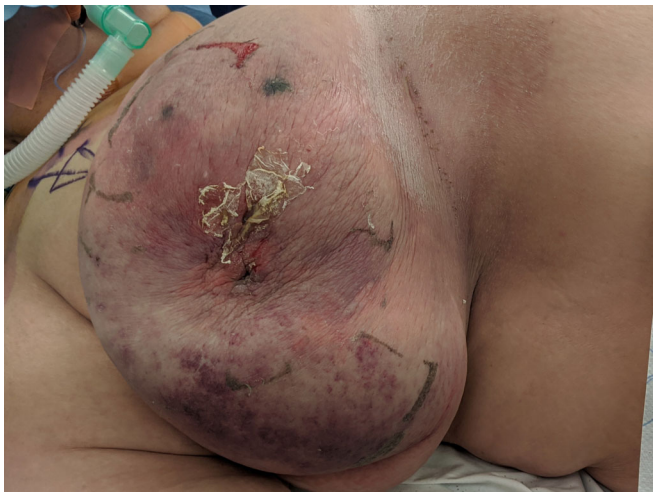

Fig 1. Appearance of the right breast immediately prior to debridement.

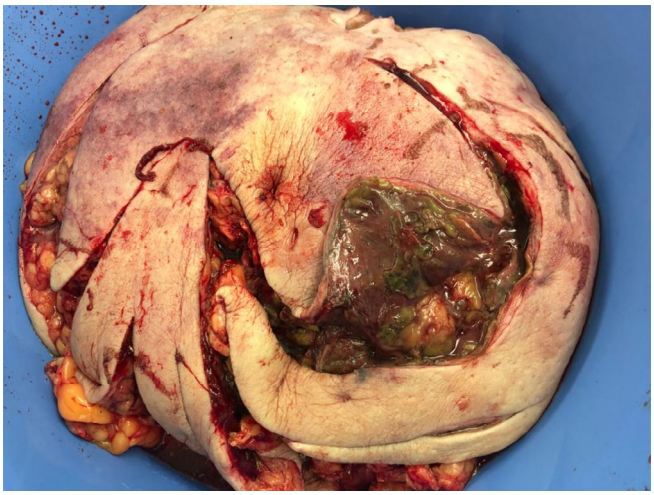

Fig 2. Intra-operative photography. Mastectomy specimen demonstrating the serial incisions required in order to reach viable tissue.

also an ex-smoker and suffered from anxiety. Due to the COVID-19 pandemic lockdown measures, the patient was reluctant to present to the emergency department, but also struggled to find adequate medical attention in the community.

On arrival, the patient was in septic shock with a metabolic acidosis and acute renal failure requiring vasopressor support and continuous venous–venous haemodiafiltration. Her right breast showed signs of a necrotising infection with subcutaneous crepitus (Fig. 1).

The patient was commenced on broad spectrum antibiotics (meropenem, vancomycin and caspofungin) and taken to theatre for debridement of her right breast. Intra-operative findings were concordant with necrotising fasciitis and a complete mastectomy was required to fully excise the diseased tissues (Fig. 2). A negative-pressure dressing was applied with a planned re-look in 24 h. She remained intubated and was transferred to the intensive care unit.

Upon return to theatre, the necrosis had extended into the axilla and a further debridement was performed (Fig. 3A). The patient was kept intubated and transferred to another tertiary centre to receive hyperbaric oxygen therapy. Two cycles were received in total. On day five after her initial mastectomy, the wound conditions were favourable and repaired with primary closure (Fig. 3B). She was successfully extubated, weaned off inotropic support and her renal function returned to baseline. She recovered well on the ward with ongoing intravenous antibiotics, drain tube management and allied health input.

Histopathological assessment confirmed the diagnosis of necrotising fasciitis within the resected tissue. Of note, there was no evidence of vasculitis in the breast. Tissue cultures revealed *Staphylococcus hemolyticus*, *Peptinipholus*, *Enterococcus faecalis* and *Candida albicans*.

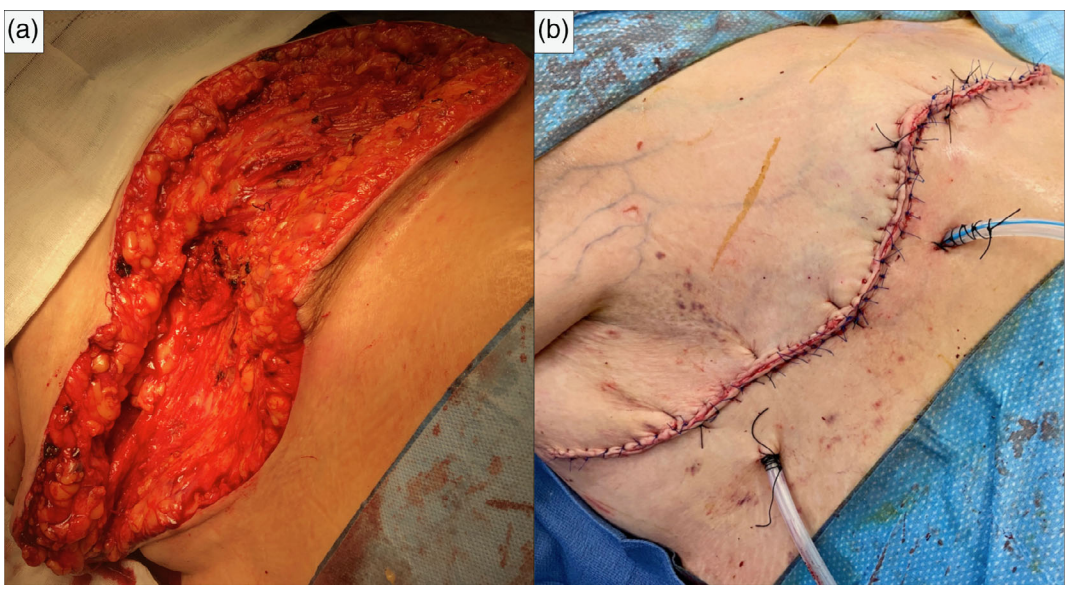

Fig 3. Intra-operative photographs demonstrating both the extent of debridement (A) and appearance following delayed primary closure (B).

Necrotising fasciitis is a rare condition characterized by widespread necrosis of subcutaneous tissue and fascial planes with significant systemic toxicity. It is associated with an average mortality of 20.6% and is a surgical emergency.[1] Predisposing factors include immunosuppression, diabetes mellitus, peripheral vascular disease and malnutrition. Trauma, surgery, burns or soft tissue infections are common aetiologies for necrotising fasciitis.[2] Early signs of necrotising fasciitis include cellulitis and pyrexia, whereas systemic sepsis, blistering or crepitus manifest later with progressive disease. While necrotising fasciitis can occur anywhere, common sites include the perineum, lower extremities and post-operative wounds.[3]

In contrast, necrotising fasciitis of the breast is extremely rare, with only 13 cases described in literature.[4] Given the rarity of this condition, prompt diagnosis is hindered by mimickers such as mastitis, abscess and inflammatory breast malignancies.[5,6] Depending on the extent of the disease, various surgical treatments for breast necrotising fasciitis have been described including debridement and skin graft, quandrantectomy, nipple conserving debridement and radical mastectomy.[7–9] In a report by Alshareef and Alsaleh, bilateral mastectomies were performed for involvement of both breasts.[6]

With this rare condition, this case highlights the collateral healthcare issues brought upon by the COVID-19 pandemic. A delay in presentation due to lockdown orders resulted in clinical progression to an end-stage, critical condition requiring radical medical and surgical measures. The full ramifications of the virus on our economy, healthcare and livelihoods will not be known until long after the pandemic is over. However, it is highly likely that the viral pandemic will potentiate significant non-COVID-19 morbidity and mortality.

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Case of dysphagia lusoria in a patient with a non-recurrent laryngeal nerve

Dysphagia is a common, but often debilitating, symptom that is difficult to diagnose and treat. Symptomatic extrinsic compression of the oesophagus by an aberrant right subclavian artery (ARSA) is known as dysphagia lusoria. We report a rare case of this vascular anomaly in the context of an incidental finding of a non-recurrent laryngeal nerve (NRLN) during thyroidectomy. It is important to recognize dysphagia lusoria because treatment involves major vascular reconstructive surgery.

A 37-year-old female underwent a total thyroidectomy for Graves' disease. Intraoperative neuromonitoring was used to help identify a right NRLN. At a routine post-operative follow-up, the patient reported persistent dysphagia. Gastroscopy confirmed mild gastritis, but no cause for dysphagia. A barium swallow study revealed an indentation on the left side of the oesophagus at the level of the aortic knuckle (Fig. 1a). Computed tomography (CT) scan (Fig. 2) confirmed the cause of oesophageal luminal narrowing to be a retro-oesophageal right subclavian artery. Due to the severity of dysphagia, the patient underwent re-implantation of the ARSA to the ascending aorta. Subsequently, her dysphagia markedly improved and a follow-up barium swallow study demonstrated a restored oesophageal lumen size (Fig. 1b).

The incidental finding of an NRLN should prompt clinicians to think about vascular anomalies that have clinical significance. In 1761, David Bayford (1739–1790) first described the case of a 62-year-old woman with an ARSA causing dysphagia. He called it dysphagia 'lusus naturae' in Latin, which translates to 'freak of