of delayed paediatric emergency presentations in which the parents of all cases reported avoiding the hospital due to fears of contracting COVID-19. Half of the children were admitted to intensive care unit and four died. New York has experienced a significant decline in acute coronary syndrome presentations. Similarly, delays in referral to surgical teams result from awaiting COVID-19 clearance as testing is performed on patients presenting with gastrointestinal symptoms as these symptoms have been associated with COVID-19 infection.

Similar effects were seen during the severe acute respiratory syndrome (SARS) outbreak at the beginning of the millennium. At the peak of the SARS epidemic, Taiwan saw a significant reduction in ambulatory care, inpatient care and dental care patients. Fear of contracting SARS influenced people’s willingness and choice to seek adequate medical care. These concerns were reflected in cancer patients at the Taipei Veterans General Hospital, Taiwan, as 63.8% were afraid of visiting hospital during the SARS infective period and 36.2% felt SARS was more severe and fatal than their underlying cancer.

Locally, the impact of COVID-19 has led to significant changes in surgical practice. Non-emergency surgeries (category 2 – within 90 days and category 3 – within 365 days) have been suspended, protocols regarding intubation and extubation have been developed and the risk of viral exposure from laparoscopic surgeries continues to be an issue of growing debate. Acute surgical pathologies, such as appendicitis, usually treated by surgical intervention have been reconsidered towards medical management.

The COVID-19 pandemic has drastically changed medical practice worldwide and as focus remains on control of the virus, there are concerns over the toll on non-COVID patients. Fear of contracting the virus will undoubtedly impact non-COVID patients seeking adequate and timely medical care. As face-to-face consults are exchanged for alternate reviews, such as teleconferencing, healthcare workers must consider its implication on adequate clinical assessment. The challenge lies in continuing to deliver optimum care to patients, when patients themselves are too scared to seek assistance in fear of contracting, what they perceive as a more serious illness. From the surgeons’ perspective, bacterial sepsis left unchecked will result in death or require intensive care support, in a higher proportion than what has currently been seen with COVID-19 within Australasia. This message needs to reach the community, such that late presentations as described within this article are avoided.

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COVID-19 collateral damage: delayed presentation of a perforated rectal cancer presenting as Fournier’s gangrene

We describe the case of a 66-year-old male initially too afraid to leave his home due to the COVID-19 pandemic, and intentionally delaying his presentation to the emergency department with a 1-week history of persistent clinical deterioration, painful left inguinal lump and scrotal swelling. His associated symptoms included anuria, faecal urgency and passage of blood-stained mucous motions. His relevant background included diabetes mellitus, renal impairment and chronic anaemia. On examination, he looked pale and was confused, with normal observations apart from isolated hypotension (90/40 mmHg). His abdomen was soft, non-distended with a painful left irreducible inguinal lump extending into the scrotum, suggestive of a complicated incarcerated inguinal hernia. His scrotum was grossly enlarged, erythematous and tender with evidence of subcutaneous crepitus (Fig. 1). A digital rectal
examination revealed a firm irregular low rectal mass with per rectal bleeding.

Full blood count and biochemistry showed; moderate anaemia (Hb 82) with a significantly raised white cell count and C-reactive protein at 43 and 280 g/L, respectively. Kidney function was grossly abnormal (estimated glomerular filtration rate 28 mL/min/1.73m², creatinine 400 μmol/L). Arterial blood gas was suggestive of a metabolic acidosis (pH 7.26, lactate 3.5 mmol/L, base excess −15), along with diabetic ketoacidosis. Urgent non-contrast computed tomography scan of the abdomen and pelvis revealed a locally perforated mid-rectal mass associated with a large necrotic phlegmonous left inguino-scrotal collection containing pockets of gas (Fig. 2). There was no evidence of bowel incarceration or obstruction.

Following aggressive resuscitation, insulin dextrose infusion and commencement of empirical broad-spectrum antibiotics, he proceeded to an emergency flexible sigmoidoscopy that confirmed a partially obstructing circumferential mid-rectal malignant looking mass situated 8 cm from the anal verge (Fig. 3a). At laparoscopy, there was gross swelling and purulent discharge from the left inguinal canal (Fig. 3b), which uncovered a large collection extending into the scrotum. Defunctioning loop colostomy was fashioned, followed by extensive debridement of necrotic scrotal tissue with testicular preservation. The patient subsequently required multiple staged debridement and delayed wound closure.

Histopathology of the rectal biopsy confirmed adenocarcinoma and per-operative cultures grew *Klebsiella pneumoniae*, anaerobes and *Candida albicans*. Following clinical improvement and after further discussion at our multi-disciplinary surgical oncology meeting, he was discharged home 3-weeks later for planned long course neoadjuvant chemo-radiotherapy, prior to considering elective delayed laparoscopic ultra-low anterior resection.

Fournier’s gangrene (FG) is a life-threatening polymicrobial necrotising fasciitis of the perineum. It is most commonly associated with advanced age, diabetes, immunosuppression and malignancy. Patients are septic on presentation with a localizing perineal necrotising infection distinguished clinically by the presence of crepitus. Computed tomography scan is useful for delineating the extent of tissue involvement, identification of occult pathology and for operative planning. Definitive treatment involves broad-spectrum intravenous antibiotics and urgent surgical debridement for sepsis control. Commonly isolated microorganisms include *K. pneumoniae*, *Escherichia coli*, *Staphylococcus* species and anaerobes. Diagnostic uncertainty and delayed treatment are usually fatal with mortality rates up to 90%.

FG in the setting of rectal cancer is a rare event and less commonly following spontaneous rectal cancer perforation. Yoshino et al. described 17 cases of FG in the setting of rectal cancer, which makes it an extremely uncommon and subtle surgical phenomenon.
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. Faecal diversion via a defunctioning colostomy is recommended during initial surgery to aid with wound healing.

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/m², autoimmune vasculitis for which she was taking long-term low-dose prednisolone. She was