

## Case Report

# Psychosocial effect of COVID-19 lockdown suicidal cut throat injury: a case report

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## ABSTRACT

The novel coronavirus pandemic of 2020 presents vast challenges to the population particularly to vulnerable ones such as those with addictive disorders amid lockdown with no access to alcohol and difficult to reach overburdened healthcare. We present such a case of a 45 years old alcohol dependent in withdrawal with self-inflicted cut throat injury.

**Keywords:** COVID-19, Delirium tremens, Laryngotracheal trauma

## INTRODUCTION

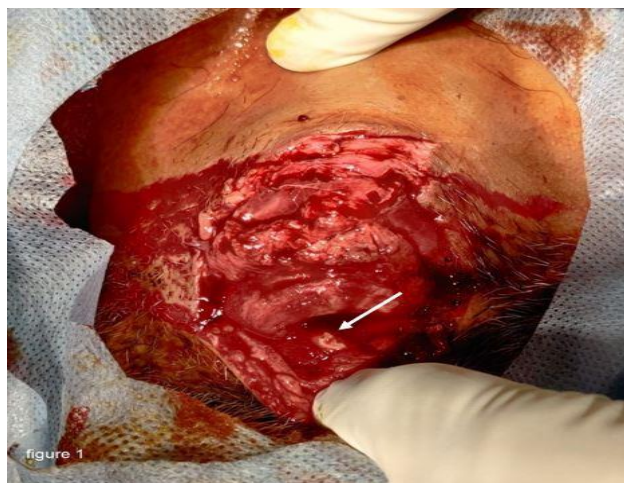
The COVID-19 pandemic and measures required to address it are taking a toll on those with addictive disorders. Various factors such as poverty, physical and mental health vulnerabilities and disruption of services due to restrictions placed on alcohol sales are having major psychological impacts leading to social isolation, increased domestic tensions and serious symptoms of alcohol withdrawal among the dependant population. These include seizures, delirium tremens, hallucinosis and self-harm.<sup>1</sup> Here we describe one such case of delirium tremens with self-inflicted laryngeal trauma.

## CASE REPORT

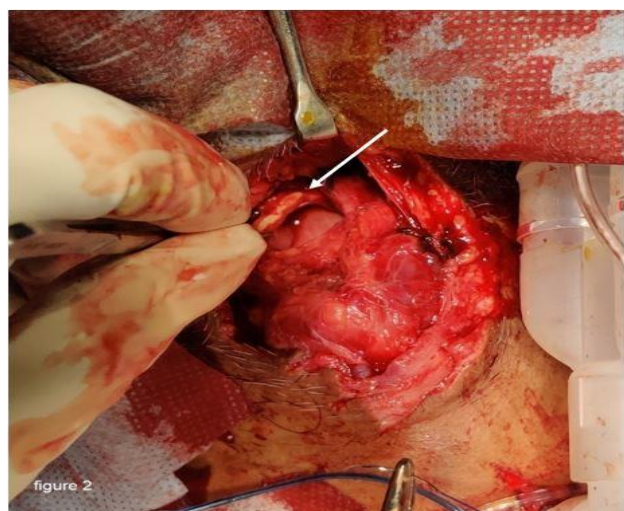
A 45 years old male, known case of alcohol dependence since, 8 years and history of no consumption for the past 6 days amid COVID-19 lockdown was brought to the emergency department of our hospital with history of self-inflicted neck trauma using a sharp weapon. The patient was unconscious on arrival with a fall in oxygen saturation, pulse rate of 110bpm and blood pressure

recording of 110/90 mmHg. Peripheries were warm and bilateral air entry was reduced on chest auscultation. There was a cut laceration in the anterior aspect of neck of 8 cm × 4 cm exposing the laryngeal cartilages. Epiglottis was partially cut causing the floppy segment to obstruct the airway and air leak was also present (Figure 1). Urgent airway management in the form of orotracheal intubation under vision using video-laryngoscopy was done and patient was put on 100% supplementary oxygen support. Pressure dressing to control bleeding was put. Intravenous lines secured and fluids were started. Head end elevation done and patient was prepared for neck exploration and repair. Neck exploration was done under local anaesthesia, large mucosal laceration with exposed thyroid cartilage was noted consistent with Schaefer type III laryngeal injury. No thyroid cartilage fracture was present and anatomy was maintained. Displaced segment of epiglottis blocking the airway was repositioned and sutured to the surrounding soft tissue (Figure 2). No major blood vessels were injured. A Tracheostomy was done at the level of 2<sup>nd</sup> to 3<sup>rd</sup> tracheal ring. Continuity of laryngeal framework was checked with intra-op direct laryngoscopy using Kleinsasser operating laryngoscope.

Neck was closed in layers using vicryl suture material. Post operatively patient was kept under ICU care and adjunctive therapy started with intravenous antibiotics, piperacillin and tazobactam 4.5 gm BD and metrogyl 500 mg TID. IV steroids and anti-reflux medications were also started. Inj. thiamine was started owing to history of dependence. Head end elevation was done and neck extension was avoided. Chest X-ray was essentially normal with no evidence of pneumothorax/pneumomediastinum. Patient regained consciousness but was restless and irritable. Psychiatry opinion was taken and a diagnosis of delirium tremens was established. Patient was started on risperidone and oxazepam. Nasogastric tube was inserted post operatively and patient was kept Nil orally for 2 days following surgery and feeds were gradually started. Patient improved eventually and repeat laryngoscopy done on 10<sup>th</sup> day was normal.



**Figure 1: Intra-operative image showing the wound with mucosal laceration, exposed cartilage and cut and displaced part of the epiglottis (white arrow).**



**Figure 2: Intra-operative image showing repositioned epiglottis (white arrow) and tracheostomy tube in situ.**

## DISCUSSION

Laryngotracheal trauma accounts for less than 1% of all cases seen at major trauma centres.<sup>2</sup> Various modes of laryngeal injuries include blunt trauma, penetrating trauma (gunshot and stab) and blast injuries. Our patient had a suicidal penetrating trauma with a knife. Various classifications have been put forth to classify neck injuries. One such classification was given by Roon and Christensen who divided the neck into three zones localising the site of trauma.<sup>3</sup> These were zone I: sternal notch to cricoid cartilage, zone II: cricoid cartilage to angle of mandible and zone III: mandible to base of skull.

Schaefer proposed to classify the patients into four groups on clinical, endoscopic and radiographic bases.<sup>2</sup> Group I patients have minor endo-laryngeal hematomas/tears, without fractures. Group II have oedema, lacerations and disruption of the laryngeal mucosa without exposure of the cartilage, nondisplaced fractures. Group III have severe oedema and mucosal disruption, displaced fractures, cord immobility and airway compromise. Group IV have two or more fractures or anterior commissure trauma and Group V have complete laryngotracheal separation. Our patient according to above mentioned classification was in zone II and Schaefer type III due to mucosal disruption, exposed cartilage and displaced epiglottis with airway compromise (Figure 1). Most common presenting symptoms seen in conscious patients are midline neck pain, hemoptysis, odynophagia, dyspnoea.<sup>4</sup> Our patient however was in an unconscious state with falling saturation on arrival. Management is mainly conservative with injuries that are Schaefer grade II or less with serial flexible fiberoptic laryngoscopy (group I), direct laryngoscopy and esophagoscopy (group II) to carefully evaluate the airway.<sup>2,4,5</sup> CECT is almost a rule to completely evaluate the patient however it could not be done in our patient pertaining to airway compromise. For higher-grade injury (III, IV and V) early surgical intervention is the key to success but first step in management of neck trauma is to secure an adequate airway. Airway management with laryngotracheal injury is controversial. Some prefer orotracheal intubation provided it is performed by a well-trained physician, under direct visualization.<sup>6</sup> This was done for our patient by an emergency physician under direct vision using a video laryngoscope. On the contrary, some authors also advocate immediate tracheostomy as the preferred airway, believing that intubation may worsen mucosal and cartilage injuries.<sup>2,7</sup> Tracheostomy was performed along with neck repair under LA for our patient. Epiglottis was reduced to its normal position and sutured with surrounding soft tissues (Figure 2). Patient was kept under ICU care for 4 days with a total hospital stay of 15 days which is similar to a study by Jalisi et al where mean duration was 12.3 days.<sup>4</sup> Adjunctive measures were started such as antibiotics and steroids, exact role for which is unclear and anti-reflux medications to limit potential for laryngeal inflammation.<sup>8</sup> Complete

psychiatric evaluation was done and delirium tremens was established. Oral oxazepam, a benzodiazepine and risperidone, an atypical antipsychotic were started both of which have proven effects in alcohol withdrawal symptoms.<sup>9</sup> COVID-19 lockdown has had profound effects on the epidemiology of addictive disorders and treatment gap as non-emergency services have been shut down with almost twice the number of usual cases presenting to emergency department.<sup>1</sup> Most of these patients are now unemployed, malnourished commonly presenting with alcohol withdrawal seizures, delirium tremens and withdrawal hallucinosis and not in a state to provide travel or contact history. Given this, it is unlikely that such patients can adhere to social distancing and cough etiquettes and thus are at a higher risk of contracting COVID-19. They are also likely to have severe form of illness due to immunosuppressed state and other comorbidities. Learning from this case we must move towards finding a solution for this neglected issue through a multidisciplinary approach.

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