

Hightened Propensity of Self-Inflicted Violence- A Collateral Damage of Covid 19 Pandemic: Review of 3 Cases of Suicidal Cut Throat Injury

Jayanta Saha¹, Debabrata Biswas², Tithi Debnath^{3*}, Subhadeep Chowdhury³, Arijit Chatterjee³

¹Associate Professor, Department of ENT and Head Neck Surgery, R.G Kar Medical College and Hospital, West Bengal, Kolkata, India

²Assistant Professor, Department of ENT and Head Neck Surgery, R.G Kar Medical College and Hospital, West Bengal, Kolkata, India

³Post Graduate Trainee, ENT and Head Neck Surgery(3rd Year), R.G Kar Medical College and Hospital, West Bengal, Kolkata, India

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Abstract

COVID 19 pandemic not only affected the physical health of the peoples but also silently damages the mental peace. 3 cases with self-inflicted cut throat injuries have been described in details in this study. All 3 patients were middle aged male. In this study we analyzed the cause behind this and described the wound along with how we managed these. All 3 cases required emergency tracheostomy. As tracheostomy is an aerosol generating procedure, during COVID-19 pandemics it was a challenge for us to undertake tracheostomy procedures safely and manage patients afterwards, minimizing risks of viral transmissions and other nosocomial infections. Multidisciplinary approach is essential in the effective management of injured. This requires the joint effort of the otorhinolaryngologist, the anaesthesiologist and the psychiatrist.

Keywords: Suicidal Cut Throat, Covid 19 Pandemic, Stress, Depressioin, Safety measures.

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Introduction

From the very beginning of the new decade, in this year 2020, World is fighting with a new demon named Corona virus disease (COVID 19). On 31 December 2019, there was a report of a cluster of 27 pneumonia cases (including seven severe cases) of unknown aetiology from the Wuhan Municipal Health Commission in Wuhan City, Hubei province, China[1] The World Health Organization declared the corona virus disease outbreak a Public Health Emergency of International Concern on 30 January 2020 [2] and a pandemic on 11 March.[3]On 30 January, India reported its first case of COVID-19 in Kerala who was a student returned from Wuhan University, China.[4]As the pandemic has progressed throughout the world day by day at geometrical progression, the Indian government started issuing recommendations regarding social distancing measures and also initiated travel and entry restrictions. Throughout March, several shutdowns and business closures were initiated and 24 March, Prime Minister announced a complete 21-day national lockdown to contain the pandemic. [5]. In this phase except essential services all other facilities were closed. On 1 May, the nationwide lockdown was further extended by two weeks until 17 May. [6] On 17 May, NDMA extended the lockdown till 31 May in all Indian states.[7] Services

be resumed in a phased manner starting from 8 June. It was termed as "Unlock 1.0".[8] Unlock 2.0, was announced for the period of 1 to 31 July, with more ease in restrictions.[9] Unlock 3.0 was announced for August and till the end of august there is intermittent lockdown in several states including West Bengal, complete closure of educational centres, local and metro railways, cinema halls. At Émile Durkheim's classic study *Le Suicide* (Durkheim 1951) [10], it has been frequently confirmed that suicide rates increase sharply during and after crises [11-13]; Hopelessness associated with depression was the major driving factor for completed suicide followed by Physical illness and economic hardship. [14]. In less than a week of the lockdown, reports of deaths and suicides related to alcohol withdrawal began to rise. In Tamil Nadu, for instance, 10 deaths have been reported in this time, many of them caused because addicts consumed dangerous substances like methyl alcohol. [15] The Suicide Prevention India Foundation (SPIF) conducted the study, in May, reported an increase in the number of people who expressed a death wish or suicidal ideation after the outbreak of COVID-19. They found anxiety (88.7%), job loss (76.1%), stress (73.6%), loneliness (73%) and financial insecurity (73%) were the top reasons for mental distress in people seeking help in this crisis time [16].

Brief review of 3 cases of suicidal cut throat injury presented to the emergency of a tertiary care centre

CASE 1: A 55 year old male patient presented to emergency amidst of lockdown during covid 19 with suicidal cut throat injury. This patient was known alcoholic for last 15 years but couldn't be able to consume it for last 8 days as there was closure of all liquor shops due to strict lockdown. According to his son he was irritable for last 3 days due to non-consumption of alcohol and after some argument with his wife he cut his throat with kitchen knife. There was irregularly incised cut injury over anterior aspect of the neck about

*Correspondence

Dr. Tithi Debnath,

C/O Sri Nitya Ranjan Debnath, Farm Side Road,
P.O: Chinsurah (R.S), Dist: Hooghly, Pin -712102, India.

E-mail: tithi_debnath@rediffmail.com

7cmx4cm. Hesitation cuts were present. There was breach in thyroid cartilage. There was no injury involving hypopharynx or oesophagus. Wound was closed by layers. Corrugated rubber drain was placed. Patient regained consciousness but was restless and irritable. Psychiatry opinion was taken and a diagnosis of delirium tremens was established. Patient kept nothing per mouth initially when he was confused, frequently monitoring of vitals like pulse, blood pressure, respiratory rate and temperature were done. High dose multivitamin supplementation (B complex such as Optineuron or Neurobion) 15 ampoules in 500 ml of NS over 4 hours once a day for

7 days was given. Proton pump inhibitors/Anti aspiration measures were taken. Under monitoring by clinician, IV Diazepam 5 to 10mg every 10 minutes or IV Lorazepam 2 to 4mg every 15 minutes was given until mild sedation is achieved. When mild sedation was achieved repeat doses of Oral Diazepam every 4 hours to maintain mild sedation for the next 5 to 7 days was given as per psychiatry consultation. COVID testing was done and report was negative for this patient. Patient was discharged after 14 days and then followed up both in ENT and psychiatry OPD.



Fig. 1: Showing multiple hesitation cuts and thyroid cartilage breach

Case 2

A 47 year old male patient presented to our emergency during Covid 19 lockdown with self-inflicted cut throat injury. We came to know from his son that this patient was a rickshaw puller and unable to earn money due to strict lockdown for last 1 month. He was depressed for a few days regarding this covid situation and uncertain future. He kept himself locked in room in that day. When they knocked the door several times but no response found they broke the door and found him in this injured condition. There was irregularly incised cut injury over anterior aspect of the neck about 8cmx5cm. Skin, superficial fascia, deep fascia and platysma were cut through the level of thyroid cartilage at the upper part separating the upper border with bilateral cornu from the rest of the cartilage, injury to left

pyriform sinus. Submandibular gland exposed in the left side. Epiglottis, base of tongue structures were intact, posterior pharyngeal wall was intact. Left side IJV was injured so ligate. Tracheostomy was done to secure airway according to Guidelines for safe ENT practice in COVID 19 issued on 03.06.2020, taking care with protocol to manage emergency patients during covid era from mohfw by wearing PPE and n95 mask and face shield. Double lumen cuffed tube was used to avoid frequent tube change due to tube blockage post operatively in this covid era as per guidelines. Severed cartilages were repaired with 3-0 prolene and wound was repaired in layers. Corrugated rubber drain was placed. COVID testing was done and report was negative for this patient. Post repair period was uneventful.



Fig2: Showing deep incised cut thorat injury through the level of thyroid cartilage at the upper part separating the upper border with bilateral cornu from the rest of the cartilage, injury to left pyriform sinus and exposure of left submandibular gland

Case 3

A 45 year presented to our emergency during this COVID pandemic but in unlock phase 2 with suicidal cut throat injury. According to informant patient was apparently well 3 months back when his company was temporarily shut down due to COVID 19. He started worrying since then due to financial issues. On May 2020 he was

diagnosed with emphysema. He was chronic smoker for last 25 years. 1 month back his company reopened and he started going back to work. He became depressed that he would catch corona and die as he already had lung problems and was constantly preoccupied with this thought. On the day of incident he went on roof for walk and on coming downstairs cut his throat with a kitchen knife, fell unconscious seeing blood and had rescued by his wife. This patient

had incised cut injury over anterior neck 8x4 cm in size, cut injury passing through thyrohyoid membrane and exposing bilateral pyriform sinus and posterior pharyngeal wall. Hesitation cuts were seen. There was also lacerated injury to epiglottis. Tracheostomy was done to secure the airway similar to previous case. Wound was

repaired in layers. Ryle's tube was inserted. Corrugated rubber drain was placed. Covid testing was done and report was negative for this patient. Psychiatric consultation was taken as like previous cases. Post repair period was uneventful.



Fig. 3: showing cut injury passing through thyrohyoid membrane and exposing bilateral PFS and posterior pharyngeal wall along with multiple hesitation cuts

Discussion

This covid 19 pandemic has drastically changed the life of people of the society and forced individuals to adapt a new normal phase in daily life .The lockdown and subsequent period have not working out and deteriorate the mental health of general population in india which by now records the highest number of suicides globally. It's very unfortunate that there is high probability of rise in suicidal cases during and following this pandemic. There are several reports of covid 19 related suicidal attempts in various journals and mass media. [17-19]Social isolation, tension, agitation, unpredictability, chronic stress, panic for contagion and economic difficulties may lead to the occurrence or aggravation of stress-related disorders and attempt of suicide. The impact of economic problems related to the COVID-19 crisis on mental health may be severe. Millions of people around the world lost their jobs temporarily or permanently [20][21][22]. Uncertainty about future, especially economic uncertainty is associated with stress-related disorders and suicide [23].

All 3 patients in our study when assessed mental state examination, were oriented to time, place, and person and had no gross impairment in cognitive symptoms, had no past history of any other psychiatric disorder or any family history of mental illness.

We found in our study that all 3 patients were male. Male populations exhibits higher suicide rates than females at all times and across all places and ethnic and socioeconomic groups .[24][25][26] and current sources and reports also demonstrate similar trends during the Covid-19 pandemic[27] A recent online international newspaper review attributes 15 suicide cases, 2 suicide attempts, and 1 homicide-suicide to the concomitant impact of Covid-19. All victims except one were men, from all tiers of society [28]. Another international review reports 7 suicide cases associated with the Covid-19 pandemic, 5 of which were men [29] Unemployment alone is associated with a two-to threefold increased relative risk of death by suicide compared with being employed [30]. Substance more

particularly alcohol has not been included under “essential services” category to be made available during “lockdown” period in many countries and the same is the case with India. [31] As evident from a recent metaanalysis (n = 31 studies; 420,732 participants), there is a strong association between alcohol use/dependence and development of suicidal ideations (odds ratio: 1.86), suicide attempts (odds ratio: 3.13), and completed suicide (odds ratio: 2.59). [32] Therefore, there is sufficient evidence to suggest that alcohol dependence is a potential predictor of suicide and this can be an imminent health hazard to the mental health of people dependent on the same. In India, due to COVID stress, on 12th Feb 2020, the first suicidal case was reported by a 50 year old man from a village in Chittoor district of Andhra Pradesh. This man due to his fear and panic that he had acquired COVID -19, he ended his life by hanging himself from a tree. [33] In our case series 3rd patient had also similar type of fear that lead him to attempt suicide.

All patients with an unknown COVID-19 status were considered as suspects and essential precautions for their management were followed accordingly. [34]

During management in this study, layered wound repair, laryngeal cartilages repair and tracheostomy were the most common surgical procedures performed. Similar treatment patterns were reported by other authors [35][36][37]. The benefit of tracheostomy in the management of cut throat injury has been highlighted in the literature [38]. It provides clear surgical field and prevents complications like air embolism and aspiration pneumonia. It also reduces air way distress due to post-operative oedema. Considerations for tracheostomy during the COVID-19 pandemic should continue to highlight as current best practice. As tracheostomy is associated with risks of infectious transmission, the procedure for emergency tracheostomy was performed as per AAO-HNS guidelines [39] using disposable equipment. Cautery use was avoided (risk of aerosol generation), cold instruments use and knot tying was done. Tracheal suction was avoided (risk of aerosolisation). Cuffed, non-fenestrated tracheostomy tube of appropriate size was used. Completely

paralyzing the patient and cessation of ventilation just before opening the trachea until inflation of the inserted tracheotomy tube were taken to minimize aerosol generation [40]. Post procedure fumigation of the operating room was performed. As there is increased risk of virus exposure in team who performs suctioning, dressing changes and other post tracheostomy care, PPE, n95 mask, face shield were used during procedures. Routine post-operative tube changes delayed for 2 days was until COVID-19 testing is negative. Cuff to remain inflated and check for leaks. Initial cuffed tube changed with uncuffed tube after 10 days the tube was blocked during day and unblocked at night for the first 24 hours, as the patient tolerated it then tube was occluded for 24 hours and afterward decannulation was done. Psychiatric consultation is taken all these cases and they are advised to follow up regularly post discharge at both psychiatry opd and ENT opd. Staying at home, unable to hang out and see friends or family, and not being able to do the things one usually do, can affect the people in different ways. It's quite possible to feel anxious or upset by the news, or by things people hear or read about COVID-19. Current situations might make individual isolated, irritated, or depressed about the future and this can lead to have thoughts of hurting ourselves, as a way of controlling emotions, releasing from this situation.

Conclusion

Based on preliminary research and insufficient data about self-inflicted cut throat injuries amidst of the Covid-19 pandemic, this study demands to be appreciated as work in progress. Pandemic-related suicidal tendency is a critical problem which cannot be placed adjourned. Prompt and effective psychological intervention is essential to protect patients from self-inflicting injuries. During management proper protective measurement is to be taken by health care workers so that we can prevent further unintentional transmission. Through government, healthcare industry and community joint effort, the suicidal tendency and self-inflicted behavior can be minimized during and after the COVID-19 pandemic.

Patients' consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed

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