Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Timing of COVID-19 vaccination in the major burns patient

Dear Editor,

The COVID-19 pandemic continues to challenge our healthcare system and impact on burn care delivery [1]. The arrival of the COVID-19 vaccinations offer a strategy to contain the pandemic with vaccine rollout prioritising medically vulnerable patients. Patients with burn injury often have significant comorbidities or acquired organ and immune dysfunction [2]. Such patients may be more vulnerable to subsequent contraction of COVID-19 and potentially have an increased mortality risk. In the unique setting of burn injury there is little evidence of when is the correct time to administer the vaccine.

There is a long history of variolation dating back to as early as 430BC [3] with Edward Jenner credited with the first vaccine and subsequent eradicaton of smallpox [4]. In burn care there is an established practice in many countries of tetanus vaccination or immunoglobulin administration in those deemed to have higher risk injury [5]. While there are recommendations on the CDC website for immunocompromised patients regarding SARS-CoV-2 there is limited evidence. The Centre for Disease Control and Prevention (CDC) recommends completion of COVID-19 vaccination 2 weeks prior to starting immunotherapy but there are no recommendations with regards to critical care or burns patients.

COVID-19 is a novel and potentially life threatening illness for which vaccines offer an important means to reduce morbidity and mortality in vulnerable patients

We believe that patients with significant burn injury requiring hospital admission constitute a vulnerable group and should be vaccinated against SARS-CoV-2 once they have recovered from the acute phase of burn injury. In our unit we use clinical status and C-reactive protein less than 40 to arbitrarily indicate a burn patient is out of acute immune response phase.

We believe this is an important issue which requires consideration in the burn community.

Conflict of interest

None of the listed authors have any conflict of interest or financial disclosures.

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http://dx.doi.org/10.1016/j.burns.2021.04.023

Burns during the epidemic, what changed?

Dear Editor,

Since the COVID-19 epidemic started, we have observed important changes in the patient population that have reached our Burn Unit in Turin, North West Italy. These differences are probably due to the drastic change in habits imposed by the public health's rules that place restrictions on individuals to limit spread of the virus.

Firstly, this led to an increase in the number of hours spent at home by the working population. Secondly, quality and quantity of care for chronic illnesses declined, including psychiatric diseases [1].

We retrospectively analysed epidemiologic data related to admissions in our Intensive Care Unit of the year 2019, compared to those of 2020.

The average age, M/F ratio and age distribution nearly overlap between the two years. The number of admissions has remained steady, with 51 cases in 2019 and 54 in 2020. This differs from other centres, where a sharp reduction in the number of admissions was observed [2]. However, in 2020, the percentage of average burns from TBSA was lower than the previous year (16.9% vs 23.3%) with a very similar mortality rate between the two years at around 6%. Compared to the expected mortality, estimated according to the Baux nomogram, the figure is very satisfactory (21.5% in 2019 and 17% in 2020). From an etiological point of view, flame burns are the most represented cluster in both samples (66.7% and 74% respectively), followed by contact burns, caustics, explosion, and electrocution.

The most interesting results emerge from the severe reduction in number of burns at the workplace and the reversal of the incidence of self-immolation.

A decrease in the employment rate in Italy (−1.2%) and in the hours worked (3.9 billion fewer hours in the first 3 quarters) [3] led, as expected, to a 300% decrease in work-related burns. In 2019, in fact, it went from 9 cases of burns, divided into 5 due to flames, two from caustic chemical and two for explosions, to 3 cases in 2020 including chemical burns, explosion and electrical injury.

With regard to suicide attempts, we observed a sharp increase in the number of self-immolations, with a 268% increase compared to the pre-COVID period, from 3 to 8 cases. In line with this observation are several theoretical models according to which distancing, isolation, financial insecurity lead to an increase in social anxiety, acute stress reactions, panic attacks, insomnia. The whole thing is linked to a rise in recurrence and admissions for psychiatric diseases at high risk of suicide [4].

Although solid epidemiological data are lacking on the number of suicides during the current epidemic, suicides are expected to increase in a similar way to that of other past epidemics, from the Spanish flu of 1917 to the Ebola epidemic or the SARS epidemic in 2003 [5].

Moreover, with a number of admissions remaining stable between the two periods considered, the absolute value of suicide attempts is also considerably high (14.8%) compared to 5% in Hosp. St. Louis, in Paris, between 2011 and 2016 [6]. Of these, two occurred by chemical burns, two by scald and four from burning with gasoline. All these in patients had underlying psychiatric pathology and/or a previous suicide history.

In addition, the percentage of burns related to improper use of ethyl alcohol increased by 175% (7 in 2020 vs 4 in 2019), most of them due to backfiring when trying to turn on stoves or grills. In our opinion, we should focus on raising people's awareness of the use of domestic alcohol, which can be replaced by less flammable solutions.

Finally, although we had developed a protocol for the management of burn diseases in COVID patients [7], and we had the ability to accommodate patients in intensive care rooms in isolation, from the onset of the epidemic to date, no patients have tested positive for COVID, neither at the diagnosis of burns nor subsequently during hospitalisation. All patients were tested at the time of admission to the ER with molecular tests, later in case of diagnostic doubt, and some at the discharge, especially if referring to rehabilitation structures.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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http://dx.doi.org/10.1016/j.burns.2021.04.020