

## Letter to Editor

**New Methanol Poisoning Outbreaks in Iran Following COVID-19 Pandemic**Mohammad Delirrad<sup>1</sup>, and Ali Banagozar Mohammadi<sup>2,\*</sup>

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After the outbreak in China, coronavirus disease 2019 (COVID-19) spread to other countries, including Iran. However, the consequences of the disease in Iran have been different from other countries. Possible reasons for this include the US sanctions on access to essential medicines and equipment, and faulty understanding and mismanagement by the ruling authorities, but also public unawareness and erroneous beliefs regarding alcohol as a protective agent.

On 19 February 2020, the first confirmed cases were reported in Qom, Iran. There were no plans to quarantine the affected areas. Consequently, the virus spread rapidly throughout the country. By 14 April 2020, 7487 cases of COVID-19 had been reported from Iran, resulting in 4683 deaths (WHO, 2020). (Due to the lack of adequate diagnostic tests, the statistics may be under-reporting.)

The Iranian government and the formal media did not provide reliable information and public education at the beginning of the epidemic. Fake news about the efficacy of various substances for the treatment or prevention of COVID-19 rapidly spread across social media. Recommendations were made on the use of vitamins, trace elements, spices, traditional medicines, herbal or animal products, opium, and alcohol for controlling the disease. It was even recommended that 'gurgling or drinking alcoholic beverages would disinfect the mouth or inside the body and prevent the infection by killing the viruses'. These factors altogether have led to numerous methanol poisoning deaths.

Legally, the production, distribution, and drinking of alcoholic beverages are prohibited in Iran. Hence, consumed alcoholic drinks are either made at home or unauthorized workrooms and re-packaged in famous brands containers or smuggled and illegally distributed even if genuine. On the other hand, for many years, several types of alcohols such as colourless ethanol (known as medical or white alcohol) or coloured alcohols (known as industrial alcohol) in different colours ranging from yellow to orange, red, and even blue have been marketed. Industrial alcohols available nationwide are labelled as ethanol, methanol or nothing (merely industrial alcohol

containing methanol and other toxic alcohols). These issues have been highlighted by Aghababaeian *et al.* (2019) and Ghadirzadeh *et al.* (2019).

An increase of methanol poisoning outbreaks started in early March and represents probably the largest toxic alcohol outbreak in Iran's history. Although formal statistics about methanol intoxication and mortality are not easily accessible, unofficial reports of colleagues across the country, since the epidemic indicate that the total number of patients attending hospital due to toxic alcohols had already reached >2500 cases in 1 month of whom more than a thousand have been hospitalized, while the country is in dire need of these hospital beds to care for COVID-19 patients. To date, it is believed that ~500 patients have died, and of survivors, some 60 developed complete blindness. Although all regions of the country were involved, the most affected provinces were Khuzestan, Fars, Tehran, East Azerbaijan, Alborz, Khorasan and Ardebil.

Many factors are involved. The leading causes are the unawareness of the society about the hazards of toxic alcohol together with the spread of fake news and recommendations across social media. Regardless of whether the government's approach to the COVID-19 was correct or not, the ruling authorities can be reprimanded for the methanol outbreaks. Why they permitted the manufacturers to distribute industrial alcohol and methanol freely for many years in the market without any restrictions, is not clear. Moreover, there are not proper facilities for the rapid diagnosis and management of alcohol intoxications. The vast majority of hospitals do not have proper laboratory equipment to determine the blood concentration of toxic alcohols, as well as required antidotes and medications for the treatment of intoxicated patients. Some of these patients have not received proper attention due to religious beliefs in Iran regarding the forbiddance from drinking (Banagozar-Mohammadi and Delirrad, 2019). Whether the government would like it or not, there is a demand for alcoholic beverages in the country, and the legislators must somehow take responsibility in this regard.

## REFERENCES

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