Correspondence

A family with nutmeg poisoning due to a home-made 'Covid treatment syrup'

The enthusiasm to find an effective treatment or prophylaxis for Covid-19 has been seen in alternative medicine systems such as Ayurveda, Siddhi, and other traditional methods unique to Asians. The substances used include ginger, coriander, cardamom, cinnamon, pepper, garlic, holy basil, sweet flag, Malabar nut and nutmeg.

Various recipes of home-made syrups using nutmeg (*Myristica fragrans*) as the main ingredient were circulated on social media among the Sri Lankan community, claiming to be effective against Covid-19. Human nutmeg poisonings with non-fatal and fatal outcomes are well documented, and these mixtures have several ingredients which could potentiate the toxic effects of nutmeg. The safe dose and toxic effect profiles of these substances are not scientifically studied.

We report a family with nutmeg poisoning following ingestion of a home-made Covid-19 preventive syrup. The diagnosis was based on the history and clinical features.

A 48-year-old woman weighing 68 kg was seen 3–4 hours after consuming a home-made syrup as a prophylactic treatment for Covid-19, with nausea, vomiting, gradual onset confusion and hallucinations. The main syrup ingredients were 200 g of nutmeg and 300 ml of bee honey made to a volume of one litre. She had consumed 75 ml, approximately a nutmeg dose of 220.58 mg/kg body weight. The children had consumed only a few sips.

She was restless and confused. Her heart rate was 120 per minute and blood pressure was 160/80 mmHg. There was generalized muscle weakness of grade 3-4/5, dry skin and acute retention of urine. She had hyponatraemia (125 mmol/L). The rest of the biochemical investigations were within normal limits. She was sedated with intravenous midazolam and hydrated with 0.9% NaCl and given activated charcoal. After 72 hours she made a complete recovery. The children developed similar clinical features to a lesser degree and were managed symptomatically.

Nutmeg is a spice used in small amounts to flavour food. In alternative medicine, nutmeg has been used as a stimulant, anti-diarrhoeal, carminative, aphrodisiac and anti-rheumatism agent. The fixed oil of nutmeg contains trimyristin and myristic acid, while the volatile oil comprises a mixture of terpenes and alkenylbenzene derivatives. Myristicin (5-allyl-1-methoxy-2,3-methylenodioxy-benzene), safrole and elemicin constitute about 80% of the alkenylbenzene derivatives. Myristicin is metabolized to 3-methoxy-4,5 methylenedioxyamphetamine (MMDA) a sympathomimetic with hallucinogenic properties. The human toxic dose of nutmeg is 1–2 mg/kg body weight. The toxic effects of myristicin include nausea, vomiting, palpitations, dehydration, hallucinations and urinary retention. These symptoms occur 3–6 hours after ingestion of myristicin and persist for up to 72 hours. Elemicin decreases muscle coordination and activity. The patient's confusion and hallucinations were due to a toxic dose of myristicin, generalized muscle weakness was likely to be due to elemicin while hyponatraemia could be due to a high level of MMDA-like substances with increased release of vasopressin resulting in syndrome of inappropriate antidiuretic hormone (SIADH) secretion.

The importance of scientific evaluation of treatments and the danger of self-medication is highlighted here. We hope that the worldwide health and regulatory authorities will educate the public regarding the danger of self-medication using medicinal regimens given in social media.

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Covid-19-associated mucormycosis in patients with renal failure

A surge of an invasive fungal infection, mucormycosis has been reported in association with Covid-19. There is no reported literature yet in a subset of patients with renal failure. These patients tend to have severe Covid-19, warranting the use of steroids, which can potentially increase the risk of mucormycosis. Uraemia and metabolic acidosis are additional risk factors for this fungal infection in these patients.

Three hundred and eighty-seven patients were admitted with Covid-19 and renal failure between March 2020 and May 2021 at a tertiary care centre in western India. We studied 4 of these patients (1%) who developed mucormycosis and 1 patient who had a mild respiratory illness 2 weeks after the Covid-19 (Covishield) vaccine. The reported efficacy of these vaccines is 60%–65%, 4 weeks after a single dose.[1] Hence, it is likely that this patient had Covid-19 due to high community transmission. As the patient did not visit the hospital during this illness, the diagnosis of Covid-19 could not be made.

All these patients were on haemodialysis for either acute kidney injury (AKI), AKI on chronic kidney disease (CKD), or end-stage renal disease (ESRD; Table I). Four patients with uncontrolled diabetes had received high-dose steroids and had hypoxaemia on admission. All patients had rhino-orbital involvement with 3 patients having additional cerebral involvement and 1 had pulmonary involvement. Median (interquartile range) time to onset after