

Editorial

Possibility of Faecal-Oral Transmission of Novel Coronavirus (SARS-CoV-2) via Consumption of Contaminated Foods of Animal Origin: A Hypothesis

E. Ahmadiara 

Department of Pathobiology, Faculty of Veterinary Medicine, Amol University of Special Modern Technologies, Amol, Iran

E-mail: emad_v2003@yahoo.com

ORCID ID: <https://orcid.org/0000-0002-4541-4085>

Recently, the novel coronavirus named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has caused huge panic and concern from public health viewpoint all over the world. The coronavirus disease (COVID-19) outbreak was first originated from the patients with pneumonia in Wuhan city, China, on 31 December 2019 (Chen et al., 2020b; Xiang et al., 2020). Until 17 February 2020, more than 71000 cases and 1770 deaths have been recorded (Yeo et al., 2020).

It is well-known that human-to-human transmission and direct or indirect contact with respiratory droplets or fomites of the infected persons is the most important route of the coronavirus transmission, and to date the faecal-oral transmission is excluded. However, close relation with infected animals and consumption of contaminated food with biological fluids of infected hosts are possible sources of zoonotic viral infections (Newell et al., 2010; Rahman et al., 2012; Wang et al., 2005).

The presence of the coronavirus has been already demonstrated in bats faeces and urine samples (Berto et al., 2018), as well as in stools of a small percentage of patients with SARS-CoV, MERS-CoV, and SARS-CoV-2 (Yeo et al., 2020). In this perspective, improper food handling, storage and preparation as well as crowded markets with high proximity of humans and animals might facilitate such kind of transmission where the risk to reach contaminated food by hands and subsequent further contacts between humans are very high.

So, perfect personal hygiene, fitted mask, ventilation, as well as avoiding crowded places, and proper food

handling are the most significant preventive actions that should be done by the individuals (Chen et al., 2020a; Zhu et al., 2020).

Although studies have shown that viruses inactivation proceeds faster in the high temperature range (≥ 50 °C) (Bertrand et al., 2012; Casanova et al., 2010; Kampf et al., 2020), it is speculated that consumption of soup made from bats might be one of the probable cause of spreading of the SARS-CoV-2 in China (Verma and Dixit, 2020; Zhou et al., 2020). Therefore, designing appropriate screening as well as surveillance studies is desirable to evaluate the possible role of foods contaminated with biological fluids of infected animal hosts in transmission of SARS-CoV-2. To date, no definite report of COVID-19 disease via consumption of food is available (ECDC, 2020). However, it is proposed that possibility of faecal-oral transmission of the SARS-CoV-2 via consumption of contaminated foods of animal origin should be studied in the future researches.

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