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.

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Letter to the Editor

COVID-19 and Holy Communion

The coronavirus disease 2019 (COVID-19) pandemic has revived the long-standing discussion regarding the potential hazards of infectious disease transmission through the shared communion cup. Widespread concern about this potential risk dates back to the 19th century when the first scientific article appeared in the literature as early as 1894.[1] Since then, many Christian leaders have expressed their views in religious journals and media, and many scientists have published their experimental studies in scientific journals. These concerns re-emerge today with the rapidly growing COVID-19 pandemic that has already infected more than 15 million people and has claimed the lives of hundreds of thousands of patients. Despite recommended prophylactic measures, people continue to attend religious activities participating in the sacrament of Holy Communion, and this practice will increase after the reopening of churches.

Despite the importance of this subject to public health, a search in the PubMed/Medline and Cochrane databases and preprints.com from the beginning of the COVID-19 pandemic up to 30 June 2020 using all possible term combinations revealed no study related to Holy Communion and possible severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (the strain of coronavirus causing COVID-19) transmission.

Since people are looking for an answer to this hot topic, we extended our search to look for similar situations in the past. Unfortunately, the literature on this topic is limited, consisting of only four experimental studies,[2–5] one clinical survey[6] and three reviews.[7–9] All four experimental studies that were performed during the last 100 years showed that some microorganisms were present in the wine or on the chalice rim. These organisms stay alive significantly longer than the time that usually elapses between two parishioner's participation in receiving communion. The authors of these studies came to a common conclusion that the possibility of spread of an infection through this religious ritual does exist. Neither the material from which the chalice and the spoon are made (usually heavy metal, such as silver) nor the sacramental wine seem to pose significant disinfectant activity to prevent the transmission of potential pathogens. However, all these statements are based on the theoretical view of each investigator as no study, to date, has been performed to investigate, retrospectively or prospectively, whether the existence of these microorganisms in the wine or on the chalice can be the source of infectious disease transmission.

It should be noted that all authors have focused their investigations on bacterial isolation from the chalice or the sacramental wine, and none has investigated the viability and transmissibility of viral agents via the common communion cup.

We also know that during an ordinary communion service, the rim of the chalice becomes inevitably contaminated with the saliva of the participants and that the organisms present in the saliva of one person can be transmitted subsequent participants. Unfortunately, the role of the bacterial or viral load in the communicants' saliva, which could be considered as the infective dose, has not been investigated. This parameter is very important, especially for respiratory viruses such as the common cold, influenza and SARS-CoV-2.

Colonisation of an individual with a potential viral pathogen does not mean that this virus can produce an infection as this depends on the immune status of each individual.

Loving and Wolf, in a prospective study with 681 participants, showed that there was no significant health difference between individuals who received Holy Communion as often as daily and those who did not attend Christian services at all.[6] Based on these findings, in 1998 the Centers for Disease Control and Prevention reported that there had never been an outbreak of infection related to the communion cup and that a theoretical risk of transmitting infectious diseases by using a common communion cup exists, but that the risk is so small that it is undetectable.[10]

According to the Christian orthodox practice, after the completion of the religious ritual of the Holy Communion, the priest has to drink all the remaining sacramental material of the chalice, which carries the microorganisms of all communicants who participated in the religious ritual. This practice is also applied to hospitalised patients who ask to receive communion as a last will before dying. As a corollary of this practice, increased morbidity rates for specific infectious diseases, and especially those of the respiratory and gastrointestinal tract, among officiating clergymen might be expected; however, there does not appear to be an obvious increased prevalence of such infections in this occupation.

In summary, the common communion cup may theoretically serve as a vehicle of transmitting infection, but the potential risk of transmission is very small. Currently, available data do not provide any support for the suggestion that the practice of sharing a common communion cup can contribute to the spread of COVID-19 because SARS-CoV-2 transmission from a patient with COVID-19 or asymptomatic carrier to other people has not been reported.

The reopening of churches will bring faithful Christians back to services, and many of them will ask for Holy Communion. The importance of receiving Holy Communion for religious Christians cannot be overlooked, and the medical community should try to address this need with providing an evidence-based risk-benefit assessment of receiving Holy Communion during the pandemic. Unfortunately, current scientific data come mainly from clinical studies examining the risk of infection by bacterial strains transmitted via saliva. The need for well designed, large-scale, cohort studies targeting viral transmission is apparent.

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For immunocompromised patients, the risk of COVID-19 seems to be higher, and these individuals may require alternate means of receiving Holy Communion, should they insist on receiving it. Some Orthodox churches keep those individuals' share aside before Holy Communion is offered to the rest of the congregation. Any individual experiencing respiratory infections, such as the common cold, influenza and COVID-19, as well as those with obvious lip or mouth lesions, such as a herpes sore on the lip, should avoid receiving communion, thus minimising the unproven but theoretical risk of contaminating the rim of the chalice and passing on their infection to healthy people.

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