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Published in:
Forum for Nordic Dermato-Venerology

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Publication date:
2020

Document Version
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

Citation for published version (APA):

Penninga, L., Arvesen, K. B., Bjerring, P., & Mikkelsen, C. S. (2020). Is COVID-19 a sexually transmitted disease and how does the COVID-19 pandemic affect sexually transmitted diseases? *Forum for Nordic Dermato-Venerology*, 25(2), 14-15. <https://www.medicaljournals.se/forum/articles/25/2/14-15.pdf>

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Is COVID-19 a Sexually Transmitted Disease and How Does the COVID-19 Pandemic Affect Sexually Transmitted Diseases?

LUIT PENNINGA¹, KRISTIAN BAKKE ARVESEN², PETER BJERRING² AND CARSTEN SAUER MIKKELSEN³

¹Specialist in Surgery, Ilulissat Hospital, Avannaq Region, Ilulissat, Greenland, ²Specialist in Dermato-venereology, Department of Dermato-Venereology, Aalborg University Hospital, Denmark, and ³Specialist in Dermato-venereology, Private Practice in Dermato-Venereology, Brønderslev, Denmark, and Research Lab., Department of Dermato-venereology, Aalborg University Hospital, Denmark



As the COVID-19 pandemic continues, we gain more insight into the nature of the disease. From the beginning COVID-19 was considered to be a respiratory disease, and patients with a severe or critical course of the disease developed acute respiratory distress syndrome (ARDS) with a high risk of mortality. Currently, we know the disease can present in a variety of ways, affecting multiple organs and causing serious damage, including severe stroke, cardiac problems, and shock.

COVID-19 was initially assumed to be transmitted by respiratory droplets and contact routes. Later COVID-19 was detected in various liquid fluids for prolonged periods after infection. For example, COVID-19 was present in the stool of 67% of infected patients from Wuhan, and the virus could still be detected in patients who already cleared the virus from the respiratory tract (1). As detection of the virus in stool occurred by PCR techniques it remains unclear whether actual transmission of the disease can occur through the stool of infected patients. Many have also asked whether COVID-19 can be transmitted through sexual activity. Initially, this was assumed not to be possible and 2 small studies could not detect the virus in vaginal secretion or semen (2, 3). Though transmission of the disease through close physical contact and kissing could occur.

A recent study has however detected the novel coronavirus in semen of 6 out of 38 tested patients (15.8%), and hence the initial assumption that COVID-19 could not be transmitted through sexual activity has been questioned (4). Interestingly, in 64% of the patients the virus was still present in semen, while tests of the oropharynx were already negative (4). Detection of the virus in semen was done by PCR-RNA techniques (4). Hence, we do not know whether transmission of the disease through semen can occur. Based on this study it is advised to use condoms to protect against COVID-19. It remains also to be elucidated how COVID-19 affects male fertility and the reproductive system (2,5). Currently, no studies have examined semen quality in recovered patients (3).

During the COVID-19 pandemic many countries have introduced laws and regulations to reduce transmission of the disease. Social distancing has been applied and suggested in many countries, including abstinence from sexual activity with unknown partners (6). These policies may have affected the incidence of known sexually transmitted diseases (STDs) like chlamydia, gonorrhoea, human papillomavirus, herpes, syphilis, and HIV. General practitioners in Denmark have reported that during the lockdown, they did not have any patients with chlamydia. In Italy consultations for STDs were much fewer during the lockdown (7). In New York city the number of confirmed STDs fell 80% from about 5,000 during the first week of March to about 1,000 in April 2020 (8). A physician from New York reported that he had no patients with symptoms of STDs during the last month (8). Similarly, in the Canberra region in Australia, there was a 52% decrease in the number of people testing positive for gonorrhoea in April, compared to the mean number of cases the last 5 years (9). Furthermore, a 34% decrease in cases of chlamydia was recorded (9).

Simultaneously with policies on social distancing many doctors have reduced face-to-face consultations to avoid COVID-19 infection of patients, health care workers and families. Only people with acute diseases were diagnosed and treated. Hence, the absence of patients with chlamydia in GP practices during the lockdown may partly be caused by reduced access to healthcare. Especially, reports from the US mention that health care workers dedicated to diagnosing and treating STDs have been relocated to other services to fight COVID-19 (10, 11). In some countries, changes due to COVID-19 regulations and policies also reduced availability of abort facilities.

Patients normally taking pre-exposure prophylaxis (PrEP) against HIV, have reported that they dropped this during the COVID-19 lockdown, as they were not that sexually active. Hopefully, they resume PrEP when resuming sexual activity.

A study from Brazil report how they have applied telemedicine to continue preventive services for HIV for adolescents (12). Special attention to continued efforts to reduce STDs is important also during the COVID-19 pandemic (13).

Currently, no epidemiological data have presented the incidence of sexually transmitted diseases before, during and after the lockdown caused by the COVID-19 pandemic on sexually transmitted diseases. Such data would clarify whether the reduction in diagnosis of STDs is due to a reduced incidence of STDs or due to reduced detection of STDs.

To conclude, currently it is unclear whether COVID-19 can be transmitted sexually, though this is potentially possible as the novel coronavirus RNA is present in semen of infected patients. People are advised to use proper prevention when sexually active with unknown partners or when sexually active with a partner who has recently had COVID-19. Furthermore, the exact influence of the COVID-19 pandemic on the incidence, diagnosis and treatment of other STDs is unclear, although it appears that social distancing has reduced the number of STDs.

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