

COVID-19 OCULAR ASSOCIATIONS IN THE SCIENTIFIC LITERATURE: SYNOPSIS 21

The COVID-19 pandemic began in December and has affected people in nearly every country in the world. We provide a summary of ocular-related associations with COVID-19 in the literature, and we plan to update this as we become aware of new manuscripts. Thus far, it appears that approximately 1-5% of COVID-19 patients experience conjunctivitis and very few COVID-19 patients exhibit virus in their tears.

Liu J, Wang AY, Ing EB. Efficacy of slit lamp breath shields. Am J Ophthalmol. 2020

- Five commercially available polyethylene terephthalate slit lamp breath shields, one cardboard model of a shield, and one shield made from a disposable salad container lid
- Used average distance from chin rest to center illuminating arm and objective lens while focused on prosthetic eye from four slit lamps
- Angle of spray estimated from videos and vapor condensation on window 26 cm from a person who sneezed
- Spray gun adjusted to emit spray at derived angle, each with consistent force
- Breath shields estimated to be 16.5 cm from patient's mouth if attached to objective lens arm and 26.5 cm if attached to oculars
- Conventional slit lamp breath shields were unable to block 3-54% of the overspray from a simulated sneeze
- Slit lamp breath shields that attach to the objective lens arm were more effective than those that attach to the oculars
- Bigger slit lamp shields at a given location are more effective
- Breath shields should be combined with masks, gloves, and handwashing to decrease the possible risk of transmission of infection
- Conclusion: "We demonstrate that commercially available slit lamp breath shields may not block up to 54% of a 47° angle simulated oronasal spray. In this study, the more anteriorly fixed breath shields at the plane of the objective lens arm were more effective than the posteriorly positioned ocular shields of comparable size, consistent with 'ray tracing' geometric principles."



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