



Incidence of infection in wearing contact lenses during covid-19: A Scoping Review

Shinta Restu Wibawa

Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta
shinta.r.w@mail.ugm.ac.id

INFORMASI ARTIKEL	ABSTRACT
Sejarah artikel: Received: 05-04-2021 Revised: 25-05-2020 Accepted: 20-06-2020 Keywords: Eye Infections, Contac Lenses, Covid 19	During the Covid-19 pandemic, many people reduced their use of contact lenses because of eye infections, but also many people continued to use them. The electronic database scoping review for studies related to Incidence of infection in wearing contact lenses during covid-19. This study followed the acronym PCC (P = population; C = concept; C = context). Papers related to the topic were selected based on their source and publication titles so that 5 papers were obtained. From the five papers, it was found that the incidence of eye infections due to using contact lenses in the pandemic era was very small and low. Some of these studies explained that infections caused, for example, redness and other symptoms of infection, were not solely due to the transmission of the Covid-19 virus, but due to other factors such as the lack of attention of contact lens users on hygiene. It was found that the incidence of eye infections due to using contact lenses in the pandemic era was very small and low

INTRODUCTION

Contact lenses (CLs) are popular as a refraction correction tool errors for approximately 175 million users worldwide. In 2019, there is data that new lens attachments and repairs were made during the international period. Contact lens prescription survey, 87%. Although The proportion of standard usage is single-use, but in reality in the field, as much as 55% of the world's population uses it again (Akerman, 2018). Usable Contac lenses require a number of steps focused on cleaning the lens and maintaining the lens case and everyday wear. as a daily routine is for applying, removing and cleaning lenses which require a high level of hygiene patience (Morgan et al, 2020).

This intricate routine led researchers to conclude that all contact lens wearers do not adhere to some degree due to certain conditions. Non-adherent behavior was associated with an increased risk of CL complications. Signs and symptoms range from reduced comfort and relatively little vision to more serious or potentially threatening inflammation due to infection. Current evidence supports that

contact lens (CL) wearers are not at high risk of developing COVID-19 eye-related complications (Hikson, 2011).

Contact lens adherence is, at best, a challenging aspect of CL wear, with reported pre-pandemic non-compliance rates ranging from 40% to 91% depending on the characteristics of the study sample, modality from lens wear, maintenance and other factors. The coronavirus pandemic (SARS-CoV-2) raised questions at first 2020 about the safety of using CL. This scoping review looks at whether any evidence or evidence is found about indications of an increased risk of contracting COVID-19 through wearing contact lenses.

METHOD

The electronic database scoping review for studies related to Incidence of infection in wearing contact lenses during covid-19. This study followed the acronym PCC (P = population; C = concept; C = context). The paper used in the scoping review are obtained through the database provider of the journal Pubmed, Clinical Key, Proquest and Science Direct databases . The author opens the website: sciencedirect. Proquest,

NCBI, clinicalkey. The researcher wrote the keywords according to the MESH (Medical Subject Heading), namely “Eye Infection”, “Contac Lenses”, “Covid-19” and full text was selected. Search time from February 2011 to March 2021.

Inclusion criteria for this study: namely: infection in wearing contact lenses during covid-19, the search was carried out for the last 10 years of limitation in the year of publication, full text article / open access, using English, the type of article was a research article, related to the effect of advanced care planning on decisions made by patients about medical actions taken will be done. Paper selection using Endnote X9 and obtained 5 papers that will be synthesized.

RESULTS AND DISCUSSION

Figure 1 shows the PRISMA flow chart diagram of the study selection process. The first is to select the title. All titles (n = 376) and after investigating the same paper, 370 papers were obtained. Papers related to the topic were selected based on their source and publication titles so that 17 papers were obtained. The combinations used in the search terms were checked against the

inclusion criteria and finally 5 papers were obtained.

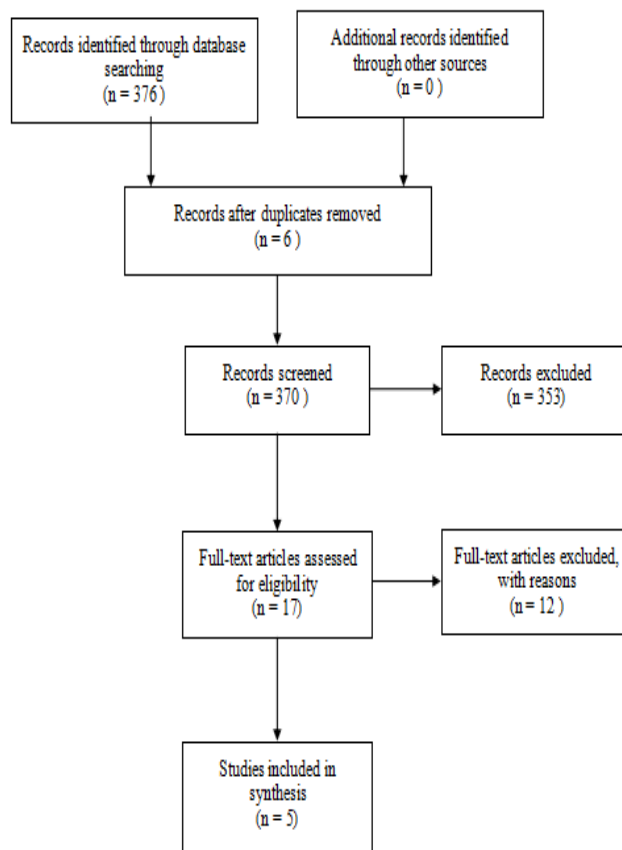


Figure 1. PRISMA Flow Chart Diagram

In this paper, we looked at the incidence of eye infections due to the use of contact lenses from Western and Asian countries. There are 3 papers from western and 2 from ASIA.

No	Author	Title	Method	Western	Incidence of Eye Lens Infections
1	Diego et al (2020)	Influence of the COVID-19 pandemic on contact lens wear in Spain	Descriptive study	Western (Spain)	A total of 737 participants with a mean age of 27.4 (± 9.3) years completed the online questionnaire. Most of the respondents were less tired CL users for 2 years this. Patient concerns about the increased risk of SARS-CoV-2 infection due to CL use (40.6% of participants) were significantly associated ($\chi^2 (1) = 11.195, p < 0.05$) with discontinuation of CL (46% of participants) during COVID. -19 pandemics.
2	May M. Bakkar (2021)	Assessment of contact lens wearers' attitude toward contact lens wear and care during Coronavirus Disease 2019 (COVID-19) pandemic: A cross-sectional online survey	A cross-sectional online survey	Asia (Jordan)	a total of 196 CL users had completed the online survey with a mean age of 26 years (± 4.1) and 90.8% of the participants were women. based on interviews with participants, social media is the main source of information about COVID-19. 38.8% of the study population reported discontinuing CL use during the pandemic. The main reason for discontinuation of lenses is a decrease in social activity during a pandemic. whereas, in contrast to that, 61.2% of participants continued wearing lenses, with the majority reporting large changes in their behavior towards CL use and care during the pandemic.
3	Jones et al (2020)	The COVID-19 pandemic: Important considerations for contact lens practitioners Lyndon Jones	Editorial	Western (Canada)	One eye viral infection to consider is epidemic keratoconjunctivitis (EKC). This disease is transmitted rapidly through direct contact, accounting for 65-90% of cases of viral conjunctivitis, with a reported frequency of 3-15% in contact lens wearers.

4	Raghav Bhargava (2020)	Contact lens use at the time of SARS-CoV-2 pandemic for healthcare workers	Additio nal article informa tion	Asia (India)	The transmission rate from ocular tissue is suggested to be low. The frequency of conjunctivitis in patients with COVID-19 is estimated to be <3 per cent
5	Iqbal et al (2020)	Bilateral Same-Day Cataract Surgery: An Idea Whose Time Has Come #COVID-19	Editoria l	Western (Canada)	There have been a total of 4 incidents of postoperative endophthalmitis following unilateral cataract surgery have been reported in the last 60 years and all were due to violation of the aseptic protocol.

From the five papers, it was found that the incidence of eye infections due to using contact lenses in the pandemic era was very small and low. Some of these studies explained that infections caused, for example, redness and other symptoms of infection, were not solely due to the transmission of the Covid-19 virus, but due to other factors such as the lack of attention of contact lens users on hygiene (Dumbleton, 2010). This COVID-19 pandemic shows that some people can be positive and spread the virus agents around asymptomatic or with symptoms (Suprayitno et al, 2020). therefore all medical teams must maintain strict health protocols when examining patients (Bizzoca et al, 2020). Although the prevalence of SARS-CoV-2 is low in tears, it is possible to be transmitted through the eye (Wu, 2020).

Given the transmission of SARSCoV-2 through the eye tissue, more studies have been conducted done to ensure its ability to infect eye tissue and tissue pathogenic mechanisms. For example, adherence to poorly reduced hand washing could increase the risk of CL-related infection by 4.5x. whereas there are as many as 50% of CL users who do not comply with hand washing procedures (Ivan, 2020). Therefore, it is very important to review the steps that contact lens users take each time they wear their lenses. (Morgan, 2020).

Contact lens wearers are less likely to wash their hands, especially using hand washing soap and dry afterwards. especially in the era of the Covid 19 pandemic like this, it is hoped that it will be even tighter to keep the spread of the virus. (CDC, 2009). CL compliance survey in UK and Ireland states that hand washing practices are better in these countries, with 96.0% of participants using soap and water to clean their hands, although the use of cloth towels is also frequently reported (Wu, 2010).

During the eye exam, face-to-face distance from a slit-lamp biomicroscopic examination can be performed ophthalmologists are at higher risk of exposure to aerosol particles Respiratory droplets and thus contact from health workers who died from COVID-19 in Wuhan, 3 were Chinese ophthalmologists who work in the same unit including Dr. Li Wenliang, who believed he had been infected while nursing asymptomatic glaucoma patients (Olivia Li, 2020). However, the extent of asymptomatic or symptomatic transmission and how much contributing to the pandemic is still unknown (Supinganto et al, 2021)

Health care workers nearly 17% of the population infected in Poland. Therefore, early identification of infected people is a priority to protect and ensure human resources continued access to surgical care. Both surgical operations, and endoscopic procedures are considered interventions with an increased risk of infection (Murtia et al, 2020). Several infection control measures are practiced universally are recommended, and only a handful of manuscripts have detailed experience gained during the ongoing coronavirus epidemic and previous epidemic outbreaks (Safadi, 2020).

Managing asymptomatic individuals with potential for COVID-19- In areas where SARSCoV is prevalent, all residents should be encouraged to remain alert for symptoms and symptoms. Practice social distancing by staying home as much as possible and keeping a distance of six feet distance (two meters) from other people when they have to leave the house (Kenneth, 2020). Patient education is very important in this regard, given the number of contacts: 1. Educate for social distancing measures, following Government and Health Authority Instruction. 2. Educate the patient for the correct administration of eye drops

technique. 3. Educate eyeglass wearers to disinfect and disinfect glasses spectacles. Advance. 4. Wash your hands carefully and thoroughly. 5. Educate contact lens users to wash their hands properly (Veriti et al, 2020).

CONCLUSION

It was found that the incidence of eye infections due to using contact lenses in the pandemic era was very small and low.

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