

NEW ONSET OCULAR MANIFESTATIONS IN COVID 19 VACCINE RECIPIENTS

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Introduction

Severe Acute Respiratory Syndrome Coronavirus-2, a novel coronavirus responsible for COVID-19, has been found in December 2019. The virus rapidly disseminated globally, prompting the WHO to declare a pandemic on 11 March 2020. COVID-19 is a severe respiratory infection characterized by dry cough, fever, & dyspnea. Although the majority of infected cases had mild symptoms & do not require hospitalization, a significant percentage of hospitalized cases present with severe hypoxemia & necessitate assisted ventilation in the intensive care unit. The clinical spectrum may vary from minor symptoms, such as fever & malaise, to severe hypoxic respiratory failure, multiorgan involvement, sepsis, & mortality. Prior studies have established a correlation among COVID-19 infection & ocular problems, whether direct or indirect. Conjunctivitis, orbital inflammatory illness, scleritis, phlyctenular keratoconjunctivitis, & retinal involvement have been extensively described as potential manifestations of COVID-19 infection. Consequently, it is essential to examine the correlation among COVID-19 immunization & ocular problems. A significant number of reports & retrospective case studies have documented potential harmful effects of COVID-19 vaccination roughly one year after the introduction of these vaccines. While certain doctors and researchers have documented negative ocular effects associated with COVID-19 vaccines, most of these instances were presented as isolated case reports. The main objective of the research was to offer a comprehensive overview and assess the occurrence of ocular adverse events after to coronavirus disease 2019 vaccination. There is a paucity of research examining the various ocular problems associated with COVID-19 vaccinations in the Egyptian population. This investigation was designed to investigate and delineate any newly emerged ocular signs in a group of Egyptian individuals who got the available COVID-19 vaccinations.

Aim of the Work

This study was designed to survey and describe any new onset ocular manifestations among a cohort of Egyptian subjects who received the available coronavirus disease 2019 vaccines.

Patients and Methods

The research has been conducted at the Ophthalmology Outpatient Clinic in Damanhour Hospital, Egypt for 1000 patints, over the study period of 6 months.

Inclusion criteria:

- Any age.
- Both genders were included.
- Patients who received COVID-19 vaccine.

Exclusion criteria:

- History of ocular or adnexal operation since the patient received the vaccine.
- Subjects with previous ocular surgery or trauma.
- Subjects with ocular diseases (e.g. Glaucoma, Uveitis,...etc.).
- Subjects with refractive errors higher than 4 diopters of myopia or 4 diopters of hyperopia.

Data collection:

The data were collected through a survey using a questionnaire that was distributed to the participants. The medical records of patients were examined with a computerized spreadsheet that encompassed all relevant data for each case, where accessible.

Results

Table 1: Vaccines related data in the participants of the study

Variables	Study participants N = 1000	
Type of vaccines	N	%
AstraZeneca	225	22.5
Sinopharm	444	44.4
Sinofac	213	21.3
Johnson	77	7.7
Pfizer	41	4.1
Duration since vaccination (days)		
Mean ± SD	63.16 ± 32.49	
Median (Range)	63 (7 - 120)	

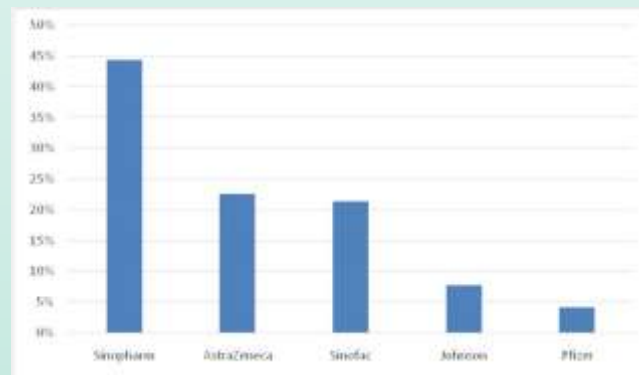


Figure 1: Type of vaccines in the participants of the study

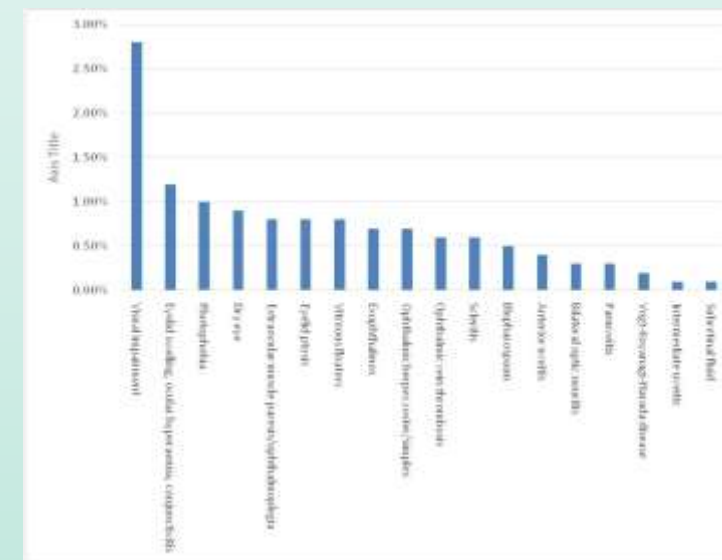


Figure 2: Type of vaccine related complications in the participants of the study

Table 2: Type of vaccine related complications in the participants of the research

Type of vaccine related complications	Study participants N = 1000	
	N	%
Visual impairment	28	2.8
Eyelid swelling, ocular hyperaemia, conjunctivitis	12	1.2
Photophobia	10	1
Dry eye	9	0.9
Extraocular muscle paresis/ophthalmoplegia	8	0.8
Eyelid ptosis	8	0.8
Vitreous floaters	8	0.8
Exophthalmos	7	0.7
Ophthalmic herpes zoster/simplex	7	0.7
Ophthalmic Vein thrombosis	6	0.6
Scleritis	6	0.6
Blepharospasm	5	0.5
Anterior uveitis	4	0.4
Bilateral optic neuritis	3	0.3
Panuveitis	3	0.3
Vogt-Koyanagi-Harada disease	2	0.2
Intermediate uveitis	1	0.1
Subretinal fluid	1	0.1

Conclusion

From this study, it could be concluded that:

- Ocular manifestations are serious side effects that are associated with the utilization of COVID-19 vaccines.
- No difference was reported between the different types of vaccines and the occurrence of ocular complications.