

COVID-19 and SARS-CoV-2 Detection in the Conjunctiva: Meta Analysis

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Background: 10% of COVID patients have eye symptoms.¹ Conjunctivitis is the most reported ocular symptom, being reported in 88.8% of all patients with eye symptoms.¹

Purpose: Literature search for SARS-CoV-2 presence in the conjunctiva of COVID patients with conjunctivitis.

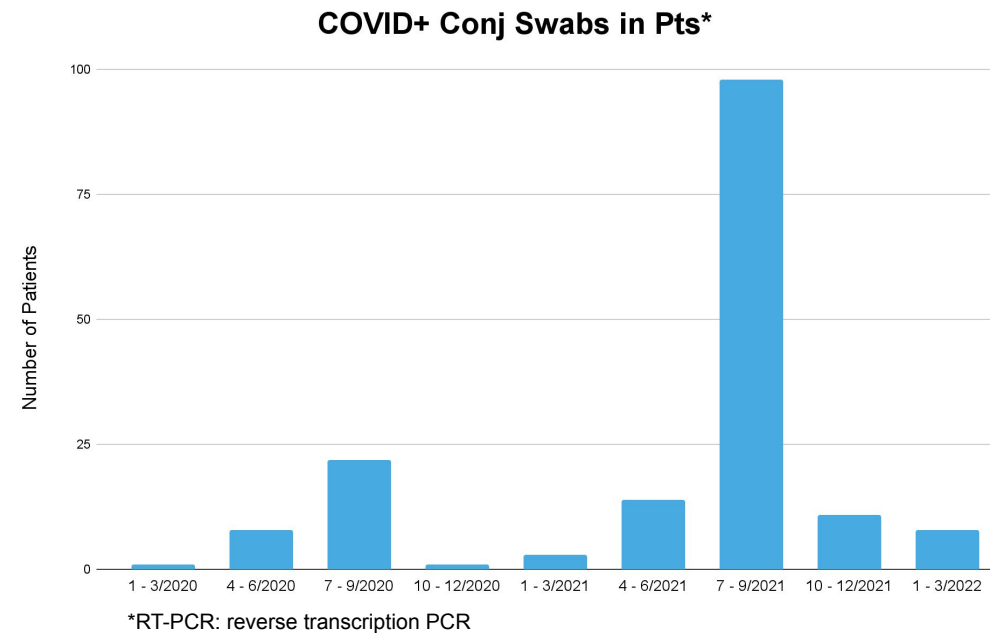
Methods

- 1) Google Scholar, PubMed
 - 2) Search terms:
 - a) "COVID conjunctival swabs"
 - b) "COVID conjunctivitis"
 - c) "COVID and eyes"
 - 3) Inclusion Criteria:
 - a) Articles dated in 2020-2022
 - b) Conjunctivitis pts
- Exclusion Criteria:
- a) Studies whose pts did not have clinical or lab-confirmed COVID but had +conj swabs

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Paper #	Pts w/ conjunctivitis	COVID+ conj swabs in pts
1	10	3
2	49	49
3	10	5
4	19	0
5	20	8
6	5	1
7	1	1
8	1	1
9	19	12
10	1	1
11	1	1
12	3	2
13	29	29
14	18	1
15	1	1
16	2	2
17	1	1
18	1	1
19	6	6
20	1	1
21	1	1
22	7	3
23	2	2
24	2	1
25	1	1
26	4	3
27	8	3
28	19	8



Results:

- 1) 28 articles with 242 COVID-19 patients with conjunctivitis.
- 2) RT-PCR Conjunctival swabs tested positive for COVID 61.1% of the time in COVID patients with conjunctivitis.
- 3) 26 patients with no conjunctivitis tested positive on conjunctival swabs.

Conclusion: Further research may be warranted to study the pathophysiology of SARS-CoV-2 in the eyes and why it is present on the ocular surface. More clinical research about COVID-19 and conjunctivitis is needed as we begin our third year of the pandemic.

References:

Nasiri N, Sharifi H, Bazrafshan A, Noori A, Karamouzian M, Sharifi A. Ocular Manifestations of COVID-19: A Systematic Review and Meta-analysis. J Ophthalmic Vis Res. 2021 Jan 20;16(1):103–12.