

Clinical Presentation of Rhegmatogenous Retinal Detachment During the COVID-19 Pandemic: A Historical Case Control Study

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Disclosures

- No relevant disclosures



Summary

- **Purpose:** To investigate the effect of the COVID-19 pandemic on the clinical presentation of acute, primary rhegmatogenous retinal detachment (RRD).
- **Patients presenting with primary RRD in a 50-day period during the USA COVID-19 pandemic (March 9th - April 27th, 2020) were compared to patients presenting in the corresponding 50-day period the previous year (March 4th - April 22th, 2019). The groups were compared with respect to demographic factors and presenting characteristics. The primary outcome was the proportion of patients with macula-on RRD at presentation. Secondary outcomes included visual acuity (VA), duration of symptoms prior to presentation, proportion presenting within one day of symptom onset, and presence of primary proliferative vitreoretinopathy (PVR).**
- **Results:** Eighty-two patients were included in the 2020 cohort compared to 111 patients in the 2019 primary control cohort. Despite similar demographic factors, significantly fewer patients presented with macula-on RRD in the 2020 cohort (17 patients, 20.7%) than in 2019 (48 patients, 42.4%, $p = 0.001$). Patients in the 2020 cohort had worse mean LogMAR VA at presentation (1.41 ± 1.18 in 2020 versus 1.03 ± 1.13 in 2019, $p = 0.03$), fewer patients presenting within one day of symptoms (16/80 patients [19.5%] in 2020 versus 41/106 patients [36.9%] in 2019, $p = 0.005$), and a greater proportion with primary PVR (11/82 patients [13.4%] in 2020 versus 5/111 patients [4.5%] in 2019, $p = 0.03$). In multivariate analysis, younger age ($p = 0.04$) and established patient status ($p = 0.02$) were independent predictors of macula-on status in the 2020 cohort.
- **Conclusions:** Patients with primary RRD during the 2020 COVID-19 pandemic were less likely to be macula-on, and more likely to have delayed presentation, worse vision, and PVR. The subgroups of established patients and young patients were spared these characteristics of delayed presentation.



Purpose

To investigate the effect of the COVID-19 pandemic on the clinical presentation of acute, primary rhegmatogenous retinal detachment (RRD).

Single-center, multi-provider group

26 retina physicians

15 clinic locations



Methods

- Patients presenting with primary RRD in a 50-day period during the USA COVID-19 pandemic (March 9th - April 27th, 2020) were compared to patients presenting in the corresponding 50-day period the previous year (March 4th - April 22th, 2019).
- The groups were compared with respect to demographic factors and presenting characteristics.
- The primary outcome was the proportion of patients with macula-on RRD at presentation.
- Secondary outcomes included visual acuity (VA), duration of symptoms prior to presentation, proportion presenting within one day of symptom onset, and presence of primary proliferative vitreoretinopathy (PVR).

Results – no significant difference between baseline characteristics

	2019 Control	2020 Cohort
N	111	82
Male	62.2 %	68.3 %
Age (years)	59.0 ±13.5	58.5 ±13.3
White Race	80.1 %	85.4 %
Zip Code Derived Median Regional Income (USD)	79859 ± 27910	74598 ± 23279
Established Patient	23.4 %	18.3 %
Distance from Repair Site (Miles)	26.5 ± 24.6	23.4 ± 23.4

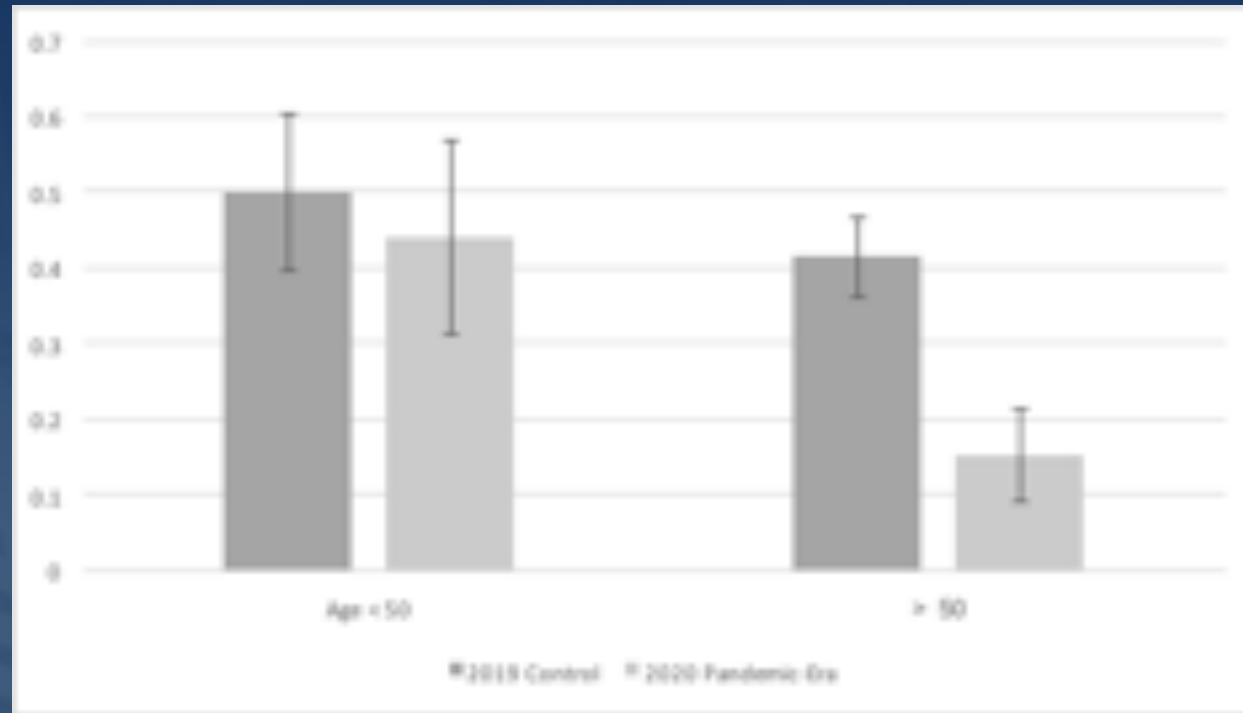
Results – During CoVID-19 there is evidence of delayed presentation

	2019 Control	2020 Cohort
N	111	82
Macula On	43.2%	20.7%***
LogMAR VA	1.03 ± 1.13	1.41 ± 1.18*
Duration of Symptoms (Days)	5.21 ± 6.06	6.49 ± 6.59
Presenting Within 1 Day of Symptoms	38.7%	20.0%**
Primary PVR	4.5%	13.4%*

*** p < 0.001, ** p < 0.01, * p < 0.05



Younger patients (< 50 years) did not have the same degree of delay in presentation



There was no difference in the age under 50 group with respect to macula status between the cohorts, while there were fewer patients with macula-on rhegmatogenous retinal detachment in the 2020 cohort ($P < 0.001$) compared with the 2019 control.

Conclusions

- Patients with primary RRD during the 2020 COVID-19 pandemic were less likely to be macula-on, and more likely to have delayed presentation, worse vision, and PVR. The subgroup young patients (< 50 years) were spared these characteristics of delayed presentation.

