

## Abstract 158

### RISK OF RETINAL VEIN OCCLUSION FOLLOWING COVID-19 VACCINATION: A SELF-CONTROLLED CASE SERIES

Oral

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#### Purpose:

Recently, there have been anecdotal reports of retinal vein occlusion (RVO) following COVID-19 vaccination. The purpose of this study was to evaluate the potential association between COVID-19 vaccination and RVO.

#### Methods:

This multicenter self-controlled case series included patients with RVO seen in five tertiary referral centers in Italy. All adults who received at least one dose of the BNT162b2, ChAdOx1 nCoV-19, mRNA-1273 or Ad26.COV2.S vaccine and had a first diagnosis of RVO between January 01, 2021, and December 31, 2021 were included. Incidence rate ratios (IRRs) of RVO were estimated using Poisson regression, comparing rates of events in a 28-day period following each dose of vaccination and in the unexposed control periods.

#### Results:

210 patients were included in the study. No increased risk of RVO was observed after the first dose (1-14 days IRR: 0.87, 95% CI: 0.41-1.85; 15-28 days IRR: 1.01, 95% CI: 0.50-2.04; 1-28 days IRR: 0.94, 95% CI: 0.55-1.58) and second dose of vaccination (1-14 days IRR: 1.21, 95% CI: 0.62-2.37; 15-28 days IRR: 1.08, 95% CI: 0.53-2.20; 1-28 days IRR: 1.16, 95% CI: 0.70-1.90). No association between RVO and vaccination was found in subgroup analyses by type of vaccine, gender and age.

#### Conclusions:

This self-controlled case series found no evidence of an association between RVO and COVID-19 vaccination. The apparent temporal relationship between vaccination and RVO may not represent a causative association.