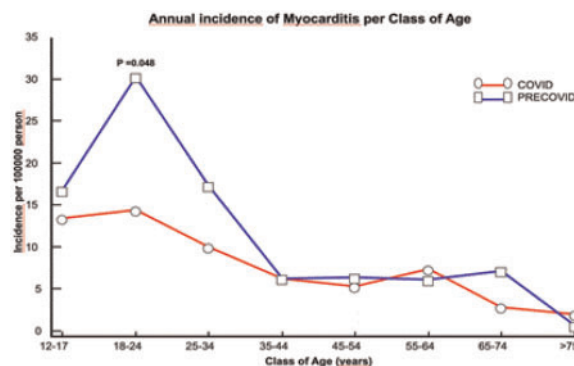


**Methods and results:** This is a retrospective cohort study examining the incidence and prevalence of acute inflammatory heart diseases (myocarditis, pericarditis) in provinces of Pisa, Lucca and Livorno (total population of 11421285 inhabitants) in two time-intervals: (i) prior to (PRECOVID, from 1 June 2018 to 31 May 2019) and (ii) during the COVID-19 pandemic (COVID, from 1 June 2020 to May 2021). Overall 259 cases of inflammatory heart disease (myocarditis and/or pericarditis) occurred in the areas of interest. The annual incidence was of 11.3 cases per 100 000 inhabitants. The annual incidence of inflammatory heart disease was not significantly different (12.1/100 000 in PRECOVID vs. 10.3/100 000 in COVID;  $P=0.22$ ). The annual incidence of acute myocarditis was significantly higher in PRECOVID than in the COVID: respectively, 8.1/100 000/year vs. 5.9/100 000/year ( $P=0.047$ ), consisting in a net reduction of 27% of cases. Particularly the incidence of myocarditis was significantly lower in COVID than in PRECOVID in the class of age 18-24 ( $P=0.048$ ) (Figure). The annual incidence of pericarditis was not significantly different (4.03/100 000 vs. 4.47/100 000;  $P=0.61$ ).

**Conclusions:** Despite a possible etiologic role of SARS-CoV-2 and an expectable increased incidence of myocarditis and pericarditis, data suggest a decrease of acute myocarditis and a stable incidence pericarditis and both diseases.



### 394 Incidence and prevalence of acute myocarditis and pericarditis prior to and during COVID-19 pandemic

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**Aims:** Myocarditis and pericarditis have been proposed to account for a proportion of cardiac injury during SARS-CoV-2 infection. During the COVID-19 pandemic, it is reasonable to expect an increasing trend in incidence of this acute inflammatory cardiac diseases. To examine the incidence and prevalence of inflammatory heart disorders prior to and during the COVID-19 pandemic.