OR34. Evaluation of P wave abnormalities in newly diagnosed COVID-19

Rido Mulawarman, Muhammad Syahrul Ramadhan, Monica Trifitriana,
Hisham Mulawarman, Muhammad Ikhsan Nurmansyah, Rolando Agustian Halim, Chandra
Chandra Agung Maulana, Alexander Edo Tondas
Faculty of Medicine, Sriwijaya University, Palembang, South Sumatra, Indonesia;
Department of Cardiology & Vascular Medicine, Mohammad Hoesin General Hospital,
Palembang, South Sumatra, Indonesia

Aims: The aim of the current study was to evaluate P wave abnormalities, including prolonged P wave duration, prolonged P wave dispersion (PWD) and abnormal P wave axis (PWA) in newly diagnosed COVID-19 patients.
Methods and Results: This is a cross-sectional, single center study with a total of 53 newly diagnosed COVID-19 patients (confirmed with polymerase chain reaction (PCR) test) and 63 age and sex-matched control subjects were included in the study. P wave dispersion, maximum P wave duration, and PWA were calculated manually from 12-lead ECG. Patients with COVID-19 more often had prolonged PWD, defined as $PWD \geq 36$ ms compared to control group (37,7% vs 15,9%), (OR $=3,212$; 95%CI 1,34 – 7,70; p $=0,007$). There were no significant association between COVID-19 and prolonged P wave (defined as maximum P wave duration > 106 ms) (OR $=1,446$; 95%CI 0,454 – 4,6; p $=0,531$) and abnormal PWA (defined as any value of PWA outside 0 to 75°) (OR $=5,061$; 95%CI 0,548 – 46,74; p $=0,115$).
Conclusion: Our study showed that COVID-19 patients are more likely to have prolonged PWD compared to control patients. However, COVID-19 was not significantly associated with prolonged P wave and abnormal PWA. We believe that initial non-invasive evaluation of PWD may serve as a predictor of atrial arrhytmias often found in COVID-19 patients.