Arrhythmias - Electrocardiography (ECG)

# Electrocardiographic characteristics of patients with coronavirus disease 2019 (COVID-2019) related pneumonia at first presentation

Nguyen U.[1]; Strik M.[2]; Abu-Arib S.[2]; Bruekers A.[1]; Nguyen T.[1]; Massud A.[1]; Willems R.[1]; Dekker S.[1]; Spaetgens B.[1]; Engels E.[1]; Crijns HGJM[1]; Koopmans R.[1]; Henry R.[1]; Stehouwer CDA[1]

[1]Maastricht University Medical Centre (MUMC), Maastricht, Netherlands (The)
[2]University Hospital of Bordeaux, Bordeaux, France

**Purpose:** To evaluate electrocardiographic (ECG) characteristics at first presentation in patients with possible coronavirus disease (COVID-19) pneumonia.

**Methods and results:** 356 patients presenting at the emergency room with possible COVID-19 pneumonia based on clinical presentation and computed tomography findings were included and subdivided into a COVID-19 positive group ([COVID-19-positive], n = 231, 65%) and a COVID-19 negative group ([COVID-19-negative], n = 125, 35%) based on polymerase chain reaction tests.

The study population was predominantly middle aged-elderly (67 ± 14 year; n = 235, 66% male). Mortality rate was 24% after 1-month follow-up. There were no significant (NS) differences in sex, age, and mortality between the COVID-19-positive and COVID-19-negative group.

Atrial fibrillation (AF) was common (9%), though its prevalence was NS (regression analyses adjusted for age and sex) different in the COVID-19-positive vs. the COVID-19-negative group. ECG characteristics reflecting atrial enlargement and repolarization abnormalities were frequently present (<38% and 14% respectively). No significant differences were found between the COVID-19-positive vs. the COVID-19-negative group for the majority of morphological ECG characteristics (Figure 1 for more detailed data).

**Conclusion:** AF and ECG characteristics reflecting atrial enlargement and repolarization abnormalities are commonly present in COVID-19 patients. The prevalence of these ECG characteristics however do NS differ from their COVID-19-negative counterparts.

Abstract Figure.