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ELECTROCARDIOGRAPHIC SIGNS OF AUTONOMIC IMBALANCE IN FIRST-EPIISODE SCHIZOPHRENIA SPECTRUM DISORDERS— RELATIONS TO FIRST TREATMENT DISCONTINUATION AND FIVE-YEAR REMISSION STATUS

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Introduction: Schizophrenia has since over a hundred years been associated with autonomic dysregulation, but the prognostic importance of this phenomenon is unclear.

Objectives/aims: To explore measures in electrocardiograms (ECG) reflecting autonomic balance in early schizophrenia spectrum disorders and to examine their relation to subsequent outcome. Three aspects of routine ECG measures were investigated:

- 1) differences between patients with first-episode schizophrenia spectrum disorders and healthy controls,
- 2) relations to early discontinuation of first antipsychotic medication and finally
- 3) associations to symptomatic remission status five years later.

Methods: Twelve-lead ECGs were recorded at baseline in 58 patients with first-episode schizophrenia spectrum disorders and in 47 healthy controls of similar age. Selected ECG variables included heart rate and measures of repolarization and left ventricular hypertrophy. Pharmacotherapy data were extracted from medical records. At a five-year follow-up the patients were interviewed and assessed with the Positive and Negative Syndrome Scale.

Results: Patients had higher heart rate and a different ST-T pattern than the controls. High T-wave amplitudes in the leads aVF and V5 and ST-elevations in V5 were associated both with higher risk of an earlier discontinuation of first antipsychotic pharmacotherapy (hazard ratios 1.3- 2.4) and with non-remission five years later (odds ratios 2.9-6.4).

Conclusion: In this longitudinal cohort study, simple ECG measures reflecting autonomic balance in the early phase of schizophrenia spectrum disorders contained prognostic information. However, as this is the first report of this association and is based on a relatively small sample, the results should be interpreted with caution.