21. Prolonged QT Intervals in Patients with Out-of-Hospital Ventricular Tachycardia Cardiac Arrest
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Objective: To determine the prevalence and outcome of out-of-hospital ventricular tachycardia (VT) cardiac arrest with a prolonged QT interval and to identify the subset with torsades de pointes (TdP).

Methods: Design: Retrospective review. Setting: Fire department-based paramedic system. Participants: Non-traumatic VT cardiac arrest (1/91–12/94) with a supraventricular perfusing rhythm (SVPR) and a measurable QT interval. Interventions: QT interval was measured from a SVPR and corrected QT interval (QTc) was calculated (prolonged if >0.45 sec). VT was classified as polymorphic or monomorphic.

Results: 190 patients met inclusion criteria. 51% of patients had a prolonged QTc (PQTc). The overall hospital discharge rate was 28.4%. No difference with respect to paramedic-witnessed arrests in each QTc group was found (25.8% normal QTc [NQTc] vs. 27.8% PQTc; p = 0.752). Patients with PQTc were less likely to be discharged from the hospital (19.6% vs. 37.6%; p = 0.01). Patients with PQTc were not more likely to have PVT (37% vs. 40%; p = 0.705). 16 (8.4%) patients had TdP. 27.8% of TdP and 26.8% of non-TdP patients were discharged (p = 0.912).

Conclusions: Among this subset of patients with VT cardiac arrest, a majority have a PQTc and are less likely to survive compared to patients with NQTc. TdP is uncommon in this population and does not appear to affect survival.