EP News: Quality Improvement and Outcomes

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In this issue of *Heart Rhythm*, we continue this quarterly feature highlighting developments and advances in quality improvement in the delivery of heart rhythm care. The current issue focuses on quality improvement surrounding the challenges created for heart rhythm care during the coronavirus disease 2019 (COVID-19) pandemic.

Restructuring electrophysiology during the COVID-19 pandemic: A practical guide from a New York City hospital network

Rubin et al (Crit Pathw Cardiol 2020 Apr 27:10.1097, PMID 32324622) reported on the experiences from 4 different electrophysiology programs in a large New York City hospital network during the time that New York was the global epicenter of the COVID-19 pandemic. They describe their successful implementation of the HRS/ACC/AHA COVID-19 practice guidance[1] and other critical changes to their practice. Providing a pathway for other centers, they describe 7 key steps for strategic implementation: (1) acknowledging that a public health crisis has arrived; (2) determining what urgent electrophysiologic procedures are possible; (3) optimizing staff deployment to minimize exposure and preserve personal protective equipment; (4) coordinating with other clinical sections, electrophysiology groups, and hospitals; (5) developing strategic plan for management of inpatient consultations; (6) establishing telemedicine; and (7) planning administrative restructuring. They described their "ramp-down," including a reduction in laboratory case volume of 80%–95% following implementation of a policy to perform procedures only in patients felt to have a likelihood of significant clinical deterioration within a short period of time (ie, 48 hours to 1–2 weeks). The authors also share their pearls regarding specific patient management, including the challenges encountered in the implementation of telehealth. They also describe the use of remote inpatient consultation and telemetry for QTc determinations in COVID-positive patients, performing generator change within 1 month after the onset of elective replacement indicator, and prioritization of same-day discharges whenever possible. *Based upon their experience, the authors conclude and emphasize the need for proactive planning during a pandemic, including the importance of developing contingency plans before the COVID-19 pandemic reaches a hospital system. They also emphasize the importance of streamlining care and mobilization of resources necessary for transitioning to telemedicine in the midst of a pandemic.*

Inpatient use of ambulatory telemetry monitors for COVID-19 patients treated with hydroxychloroquine and/or azithromycin

Chang et al (J Am Coll Cardiol 2020;75:2992–2993, PMID 32330546) conducted a single-center study evaluating the safety and feasibility of utilizing mobile cardiac outpatient telemetry for heart rhythm and QT monitoring in 117 patients with COVID-19 who were receiving hydroxychloroquine with or without azithromycin and were hospitalized on non-telemetry floors. Monitoring was continued until discharge or until the hydroxychloroquine with or without azithromycin therapy was completed. The average age of the patients was 60 years, 41% were women, 5% had coronary artery disease, and less than 1% had heart failure. Over 295 patient days of follow-up, there were 28 urgent alerts in 18 patients, including 15 alerts for atrial fibrillation with rapid ventricular rates, 2 alerts for nonsustained ventricular tachycardia, and 5 alerts for a QTc $>$500 ms. Overall, 16 of the 28 urgent alerts resulted in changes in patient management. Hydroxychloroquine was stopped in 1 patient after the QTc increased from 460 to 565 ms. *The authors conclude that although mobile cardiac outpatient telemetry has not been approved for QTc monitoring for patients with atrial fibrillation or flutter, QRS duration $>$160 ms, or T wave $<$5% of the peak QRS amplitude, their single-center study suggests that innovative management of QTc monitoring is possible under the resource-constrained conditions of a pandemic.*

Reference

1. Lakkireddy DR, Chung MK, Gopinathannair R, et al. Guidance for Cardiac Electrophysiology During the COVID-19 Pandemic from the Heart Rhythm Society COVID-19 Task Force; Electrophysiology Section of the American College of Cardiology; and the Electrocardiography and Arrhythmias Committee of the Council on Clinical Cardiology, American Heart Association [published online ahead of print]. Heart Rhythm 2020 Apr 1. S1547-5271(20)30289-7.

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