

RESEARCH:

Necessity of 45-day Transesophageal Echocardiography after the WATCHMAN Procedure Amid the COVID-19 Pandemic

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Background: Amid the COVID-19 outbreak, elective aerosolizing procedures such as transesophageal echocardiography (TEE) should be deferred as the procedure provokes coughing and gagging, which can cause aerosolization of the virus. In atrial fibrillation patients undergoing left atrial appendage closure (LAAC), TEE is typically performed at 45 days for device surveillance before oral anticoagulation (OAC) is discontinued. We sought to investigate whether a 45-day TEE is absolutely necessary for patients who underwent LAAC amid the COVID-19 pandemic.

Methods: We retrospectively studied 200 patients who underwent successful WATCHMAN procedure at the Rochester General Hospital (June 2016 - June 2019). All patients were maintained on OAC and aspirin upon discharge until 45-day TEE was performed. We aimed to assess TEE measured peri-device flow at the time of WATCHMAN implantation and at 45 days. We also aimed to evaluate the incidence of device-related thrombus (DRT) on 45-day TEE.

Results: Among 189 patients without peri-device flow during the WATCHMAN procedure, 180 underwent TEE at 45 days, and only 1/180 (0.6%) had significant peri-device flow (i.e., > 5mm). Among 11 patients with peri-device flow 1 – 5mm during the procedure, 9 underwent TEE at 45 days, and none (0%) had significant peri-device flow. Of 189 patients who had 45-day TEE, 1/189 (0.5%) had significant peri-device flow. No patients had DRT at 45 days.

Conclusions: The incidence of significant peri-device flow and DRT at 45 days is very low. Our results suggest that OAC may be safely discontinued at 45 days without a TEE. Deferring 45-day TEE post-WATCHMAN implantation has the potential to minimize the use of personal protective equipment and reduce preventable risks of viral transmission amid the COVID-19 outbreak.