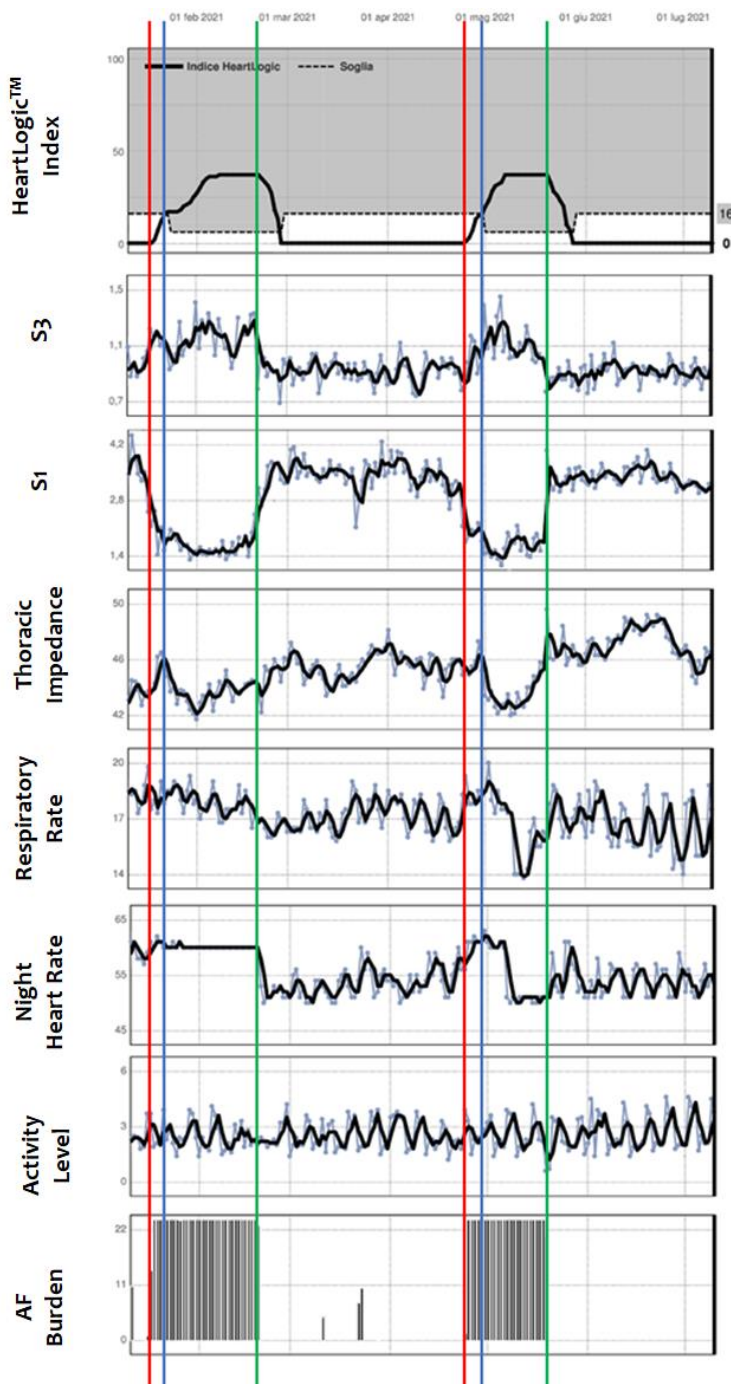


Case Of The Month #2 2022

A 72-year old man with post-ischemic dilated cardiomyopathy, hypertension, dyslipidemia and paroxysmal atrial fibrillation underwent a VIGILANT™ EL dual-chamber ICD implantation in December 2019. The patient was enrolled in LATITUDE™ remote monitoring system and HeartLogic™ diagnostic algorithm was activated.



On January 23rd, 2021 (first blue line) an HeartLogic alert has been notified to the center, but the patient didn't report any sign or symptom for the following 10 days (early February), when he contacted the center due to dyspnea appearance. At in-office visit, it was noticed the onset of a new episode of persistent Atrial Fibrillation some days before HeartLogic alert (first red line). The physician decided to perform an electrical cardioversion procedure on February 18th (first green line): the sinus rhythm was restored, dyspnea symptoms disappeared, and the patient was fine. Few days after also the HeartLogic index was solved. The patient was fine up to the end of April, when a HeartLogic alert occurred (second blue line) after a new onset of persistent atrial fibrillation (second red line). On May 18th the patient reported dyspnea symptoms and was hospitalized to undergo an AF ablation procedure (second green line). Following the ablation, the sinus rhythm was restored, the HeartLogic index suddenly decreased under the recovery threshold and the patient was free from dyspnea symptoms.

The analysis of trends showed, for both HeartLogic alerts, marked changes in heart sounds at the time of atrial fibrillation onset: first heart sound decrease and third heart sound increase.

Moreover, immediately after atrial fibrillation resolution through cardioversion or ablation, the first heart sound immediately increased, and the third heart sound decreased reaching normal values and resulting in HeartLogic alert solution.

Also, the thoracic impedance seemed to decrease at the time of atrial fibrillation onset, probably for the worsening of pulmonary congestion. This confirms the hemodynamic consequences of the arrhythmia, more clearly detected by the heart sounds trends and the combined index.

This case highlights the interaction between Atrial Fibrillation and Heart Failure: significant changes on physiological sensors have been observed after AF onset, indicating a worsened heart failure status.

The system was able to identify worsening of clinical conditions and the improvement after the sinus rhythm restoration using a multiparametric approach.

“Courtesy of “Policlinico Federico II” Hospital (Naples – ITALY)”

CAUTION: The law restricts these devices to sale by or on the order of a physician. Indications, contraindications, warnings and instructions for use can be found in the product labelling supplied with each device. Information for use only in countries with applicable health authority registrations. This material not intended for use in France. © 2022 Boston Scientific Corporation or its affiliates. All rights reserved. CRM-1265304-AA **CE 2797**