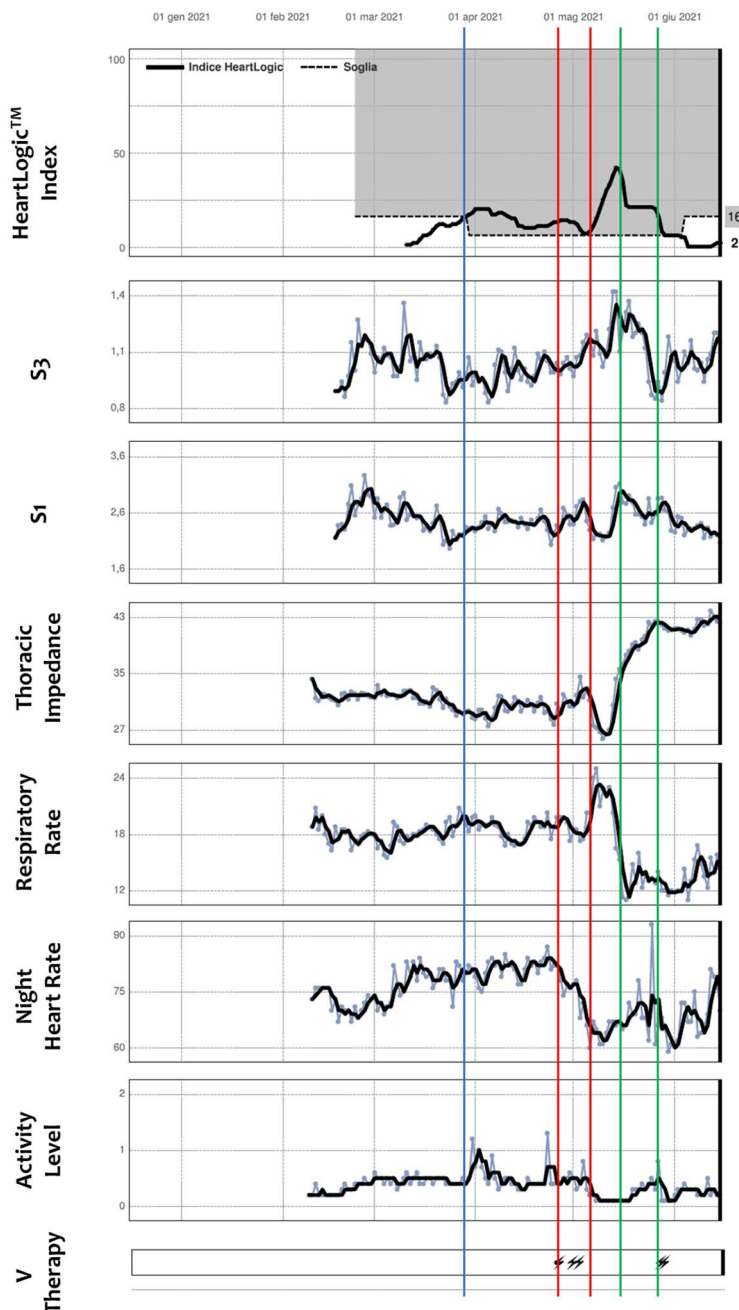


Case Of The Month #7 2021

A 60 years old man with chronic coronary syndrome, diabetes mellitus type II, chronic kidney disease, hypertension and 30% of left ventricular ejection fraction, underwent a Resonate dual-chambers ICD implantation on February, 9th 2021, after an heart failure event. The Latitude remote monitoring system and HeartLogic algorithm were activated.



On March 29th, an HeartLogic alert has been notified to the center (blue bar), but at the phone contact patient reported clinical stability and no symptoms of heart failure.

The HeartLogic index was low and stable and the physician decided to adopt an active monitoring approach.

Starting from April 25th (first red bar) ventricular tachycardia events were recorded and anti-tachycardia pacing therapies and shocks were delivered. Patient refused to come for an examination till May 4th, after the last arrhythmic event which led to traumatic syncope (second red bar). The physician decided to hospitalize the patient: edemas, murmur and elevated NT-proBNP value (1419 pg/ml) were observed.

The patient was treated with intravenous diuretic therapy and oxygen-therapy and he underwent angioplasty with recanalization of left anterior descending artery, but complicated by contrast induced nephropathy.

Due to the persistence of signs of congestion, worsened by severe and acute renal failure, and due to a rapid increase of HeartLogic, the physician further increased diuretic therapy shifting from Lasix boluses to continuous infusion at high dosage.

Starting from May 14th (first green bar) the HeartLogic index decreased, an improvement of clinical status (edema decrease and improvement of SpO₂) and a remarkable body weight reduction (from 103 Kg to 89 kg after stabilization) were observed.

The patient was fine and on May 24th (second green bar) he was discharged with oral diuretic therapy: the NT-proBNP index was 643 pg/ml.

The analysis of trends showed that the HeartLogic alert was driven mainly by heart sounds and night heart rate, but the main increase of the HeartLogic index was observed after V-Therapy delivery and the worsening trends were third heart sound, thoracic impedance and respiratory rate, consistent with clinical course. After resolution of the ischemic source, and through high diuretic therapy infusion and oxygen-therapy the HeartLogic index recovered.

The patient had the LATITUDE communicator with him at the hospital. The information obtained from the system were used to monitor arrhythmias and the HeartLogic index, and to adjust the diuretic and antiarrhythmic therapy. This approach was judged very useful to monitor the efficacy of the therapy administered and to better define the clinical stability and the timing of discharge, that represent a crucial decision especially for those patients with many complications and a long hospital stay.

“Courtesy of AOU S. Giovanni di Dio e Ruggi D’Aragona (Salerno – ITALY)”

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