Understanding and Calculating Shock Index (SI)

Shock Index (SI) was also shown to indicate persistent failure of left ventricular function during aggressive therapy of shock patients in the ED.

The systemic inflammatory response syndrome (SIRS) criteria to predict the primary outcome of hyperlactatemia (serum lactate ≥ 4.0 mmol/L) as a surrogate for disease severity, and the secondary outcome of 28-day mortality are used as standard measures of shock. The Shock index performs well as a predictor of hyperlactatemia and 28-day mortality.

Subjects with a shock index of 0.7 or greater (15.8%) were 3 times more likely to have hyperlactatemia than those with a shock index of less than 0.7 (4.9%).

Similarly, subjects with a shock index of 1.0 or greater (24.1%) were 3 times more likely to present with hyperlactatemia than those with a shock index of less than 1.0 (7.8%).

The shock index (SI) is a bedside assessment of shock risk defined as heart rate divided by systolic blood pressure, with a normal range of 0.5 to 0.7 in healthy adults.