IMPROVED RISK STRATIFICATION OF PATIENTS WITH ACUTE DYSPNOEA

Background

Dyspnea is one of the most common symptoms at the emergency department (ED) and is a symptom of underlying disease e.g. cardiovascular disease, lung disease or infection. The physician in the ED is commonly subjected to a patient with little information except brief medical history and a state of acute dyspnea. Even in cases when the patient has one or several known diseases, which can cause acute dyspnea, the main underlying cause and severity of the current episode can be difficult to assess. Inflammatory response as well as metabolic changes can reflect on the severity of illness. Hence aiding in making decisions of intensity of treatment and level of care, or follow-up, in the case of hospital discharge.

Methods

Patients with the main symptom dyspnoea were included in the study, at the Emergency Department at Skåne University Hospital Malmö. Blood samples were analyzed for inflammatory and metabolic biomarkers and related to 90-day mortality using cox proportional hazard model. Additional statistical analyses were made using Harrells C-index and Net Reclassification Index

Preliminary results

Study 1 - Inflammatory biomarkers predicting prognosis in patients with acute dyspnea. The inflammatory biomarkers Interleukin-8 and Growth Differentiation Factor-15 were significantly and independently related to risk of 90-day mortality in patients with acute dyspnoea.

Study 2 – Amino acids predicting prognosis in patients with acute dyspnoea. Submitted to Journal of Internal Medicine February 2018. Glycine, phenylalanine and valine were significantly and independently related to risk of 90-day mortality in patients with acute dyspnoea.

Significance

There is an escalating demand on the health care system to use its resources more efficiently, without compromising medical safety and quality of care. This model could aid in prioritizing
and support a more medically justified distribution of the time, and monetary assets of the ED, as well as resources for adequate follow-up.

**Publications**