

Groundbreaking results from hospital trial: A simple blood test predicts mortality in discharged patients

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Hospitals can now avoid misjudging and sending home high-risk patients with life threatening diseases

Post-hospital mortality is a major problem worldwide. The high cost of in-hospital care is a major burden, and selection of patients for early or late discharge is currently based on clinical observation. The Danish biotech company, ViroGates, released their first CE/IVD approved product suPARnostic® in 2007. suPARnostic® was developed to identify high risk patients, to aid in the decision on who to keep and who to discharge from the hospital. The suPARnostic® assay measures a biomarker in the blood that, if elevated, is associated with increased risk of mortality.

ViroGates was awarded a grant from the European Commission, to investigate the prognostic potential of this “Risk Status Marker” test in an area with high mortality. In collaboration with the Bandim Health Project, Guinea-Bissau, West Africa, the study included more than 1600 patients with symptoms of tuberculosis (TB) in the period 2004-2007. All patients were screened for TB and 1007 of these had a negative diagnostic TB test, and were therefore sent home from the clinics with antibiotic treatment. These individuals were then visited at home three months after the hospital discharge, and a high number of them had died during those three months (51 out of 1007 individuals). The study revealed that those sent home from the hospital with a high suPARnostic® test value, were those who died. There was 16 % mortality among those in the highest suPAR quartile compared to 1% among the rest. This study has been published in the September issue of “Tropical Diseases and International Health”.

Paulo Rabna, PhD, Principal Investigator, Monitoring and Evaluation Officer at the National AIDS Secretariat in Guinea-Bissau says:

“We have identified a simple tool, the suPARnostic® assay, that identifies diseased individuals who, despite a negative TB diagnosis, have high risk of mortality. We now aim at implementing this test in the routine screening of diseased individuals seeking hospital treatment. Individuals with a high suPARnostic® test result will now go through accelerated diagnostic and clinical examination, followed by an appropriate treatment program to reduce the high risk of mortality”.

This large study confirms previous data obtained on a smaller number of acute patients at Hvidovre Hospital. In the future, acute patients at Hvidovre Hospital will be suPARnostic® tested. When the test becomes part of the routine testing on acute patients at Hvidovre Hospital, an even better examination of acute patients than today is envisioned.

Torben Mogensen, Medical Director of Copenhagen University Hospital Hvidovre, says:

“One of the great challenges in the treatment of acute patients is to identify those who are developing a life threatening disease. Once identified, appropriate treatment can be initiated and the negative development hopefully stopped. These new data confirm previous promising observations at our hospital, and we now wish to examine this test further by including it as part of the routine blood analysis on patients with acute illness at Hvidovre Hospital.”

Betina Macho, CEO of ViroGates says:

"This newest study demonstrates how a simple blood test can save lives, in this case when patients are discharged from the hospital with unnoticed illnesses. The study confirms what we have seen in other studies and from single patient cases over the last 9 years: People with high suPARnostic® level have a very high risk of dying without proper and immediate treatment. We expect that suPARnostic® will eventually be implemented in all hospitals for routine use – to help increase many patients' chances."

About ViroGates

ViroGates is an international Medtech company headquartered in Copenhagen, Denmark. ViroGates develops and distributes prognostic products for healthcare management with a single goal in mind: To identify risk patients early and improve the lives of seriously infected people globally. The novel ViroGates method, called suPARnostic®, involves the measurement of a protein found in every individual (known as soluble urokinase Plasminogen Activator Receptor or suPAR). suPARnostic® has a unique value as biomarker: Independent of the respective condition, an elevated suPARnostic® level carries a negative prognostic value and is thus a master alarm for a patient's risk status. In clinical practice, suPARnostic®'s main application is patient testing in critical care as well as monitoring of treatment efficacy and success. suPARnostic®'s prognostic value has been exemplified in various infectious conditions through clinical studies, these include sepsis, tuberculosis, malaria and HIV.

ViroGates has launched suPARnostic® in several countries in Europe, Africa and Asia and is preparing further suPARnostic® products for launch, amongst them a lateral flow rapid test – suPARnostic® Quick.

Further Information

Please contact Betina Macho, CEO (+45 6035 3340 or bm@virogates.com).



Dr Paulo Rabna (right) among the nurses of the study in Guinea-Bissau. He now hopes that routine screening of patients with suPARnostic® will become possible, to avoid sending home high-risk patients with life threatening diseases.



Patient being tested with the suPARnostic® assay at hospital.

