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Country: **Germany**

Titel of the project: **Stroke Arrhythmia Monitoring Database (SAMBA-Study)**

## Project details

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Award amount: €100,000

The aim of the SAMBA-Study is to assess different strategies to detect Atrial fibrillation in Stroke-Unit patients. Using a standardized reading of telemetric ECG-monitoring comparable to the diagnostic approach used in "Chest-Pain-Units" we hope to improve the detection of paroxysmal A. fib. on Stroke Units.

Identifying patients with paroxysmal atrial Fibrillation is one of the main tasks in the early diagnostics after stroke. Thus several diagnostic approaches have been applied on Stroke Units ranging from simple repeated 12-lead ECGs, 24h holter monitoring to more sophisticated and technically more difficult implantable event recorders. Beside those diagnostic tools telemetric monitoring of vital signs including ECG monitoring is standard in most Stroke Units but the evaluation of attained monitoring data is less standardized. In most cases a detailed analysis is not commonly applied. Comparable to the approach used in specialized "Chest Pain Units" we hypothesized that detection of paroxysmal atrial fibrillation is improved with a standardized daily "ECG rhythm analysis round" carried out for every Stroke Unit patient. In addition to atrial fibrillation, higher grade cardiac arrhythmias of other entities are common after stroke and are associated with mortality and morbidity. They may either be caused by pre-existing cardiac co-morbidity or may be a direct consequence of the index stroke. In the past, several cerebral lesion patterns mainly involving the insular cortex have been identified to be associated with altered autonomic tone leading to cardiac arrhythmias. To evaluate our approach to detect paroxysmal atrial fibrillation as well as to systematically assess the prevalence and impact of other arrhythmias following ischemic stroke we initiated the SAMBA-Study (Stroke Arrhythmia Monitoring Database; [www.Clinicaltrials.gov](http://www.Clinicaltrials.gov) No. NCT01177748) on our 14 bed Stroke Unit (University of Erlangen). Telemetric ECG monitoring data of all patients admitted to our Stroke Unit are systematically analyzed using a standardized rhythmological algorithm. The primary treating stroke team carrying out all routine diagnostics to detect arrhythmias (12-lead ECG on admission, un-standardized telemetric ECG monitoring) remains blinded to the data as long as there is no finding that requires acute intervention such as cardiac pacemaker placement. In case of detection of paroxysmal atrial fibrillation the treating stroke unit team is notified 24h after initial detection in case that routine diagnostics have not already identified the A. fib. Approval by the local IRB was obtained and the study was initiated in June 2010. To date more than 600 patients have been included. Planned analyses are a comparison of detection rates of A. fib., lesion pattern associated with A. fib, association of cerebral lesion pattern to the presence of higher grade cardiac arrhythmias. We believe that the strength of our approach to detect A. fib. is that it is easy to use and that it uses only technical means that are present on most Stroke Units. Thus it can be widely applied without expansive or complicated additional diagnostic tools. We hypothesize that using such an approach will identify more patients with cardioembolic stroke and thus will allow more efficient secondary prophylaxis in a patient population with a high risk for recurrent stroke.

## **Audience**

### **Type**

- AF Patients
- Healthcare professionals

### **Location**

Germany, Europe