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Country: **France**

Titel of the project: **The SCVL, a device for the early detection of AF during routine
blood pressure measurement**

Project details

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Award amount: €100,000

We are developing the SCVL 2011, a device that will measure blood pressure automatically but that at the same time will screen for atrial fibrillation and other cardiovascular markers. If all general practitioners did an automatic screening for atrial fibrillation, we would greatly reduce the risk of strokes.

Much earlier detection of the arrhythmia associated with atrial fibrillation might allow the timely introduction of therapies to protect the patient from progression of AF from an easily treated condition to an utterly refractory problem. The measurement of blood pressure is today an acquired automatism in the doctor's practice. We plan on adapting current technology for blood pressure measurement to detect AF during routine blood pressure examinations, so as to provide an early warning system for strokes. For the past few years, we have been developing the SCVL (Screening CardioVascular Lab), a USB-driven blood pressure monitoring system with multiple sensors that allow the user to make measurements on several limbs in real-time. The SCVL uses electronic palpation technology that combines all the advantages of manual palpation with the speed and accuracy of modern day electronics. It is the only device of its kind that is validated against the strict protocol of the BHS. It revives the art of palpation using direct oscillometric data obtained from the human body and translating it into a comprehensible format, calculating ABI (ankle brachial index) and a host of other cardiovascular parameters such as MAP, PP, cardiac output and stroke volume. The SCVL also provides full cardiovascular risk assessments according to the Framingham Risk Scores. The SCVL provides users with an intuitive way of measuring ABI and other cardiovascular parameters and brings detailed vascular assessment within the reach of general practitioners. We plan on adding a new feature to the SCVL that will maintain the pressure in the blood pressure cuff between 60 to 80 mm/Hg for an entire minute so that we can automatically detect AF based on the oscillometric pulse wave of the patient. Should AF occur during these 60 seconds, we will at the same time be able to determine the true blood pressure of the patient based on the analysis of the pulse wave. At the moment general practitioners often do not detect AF because they either do not have the training or the time to do it. The SCVL will, in less than three minutes, detect AF (and make blood pressure measurement possible during atrial fibrillation), with very little margin for handling errors and will be an easy to use device with minimum training. It will be used as a pre-screening tool by the general practitioner. If every GP did routine screening for atrial fibrillation using the SCVL, we could radically alter the international stroke landscape. We have been working with leading cardiologists and some of the world's best healthcare experts and we have put all their knowledge in a common pool. The new 2011 SCVL will give users an easy-to-use device that will detect quite accurately the early presence of atrial fibrillation.

Audience

Type

- Healthcare professionals
- Carers of AF Patients
- General public

Location

France, Europe