Amsterdam UMC
University Medical Centers

Discovery of risk factors for Sudden Cardiac Arrest in (pre)diabetes

Cambridge Diabetes Seminar

By Laura Helena van Dongen
April 2019

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No° 733381.

ESCAPE-NET

ARREST

Introduction

- Sudden cardiac arrest (SCA) causes 50% of cardiovascular mortality / 20% total mortality
- ±20% survival (the Netherlands)
- Risk for SCA mostly unknown
- Earlier recognition needed – timely medical care / preventative strategies

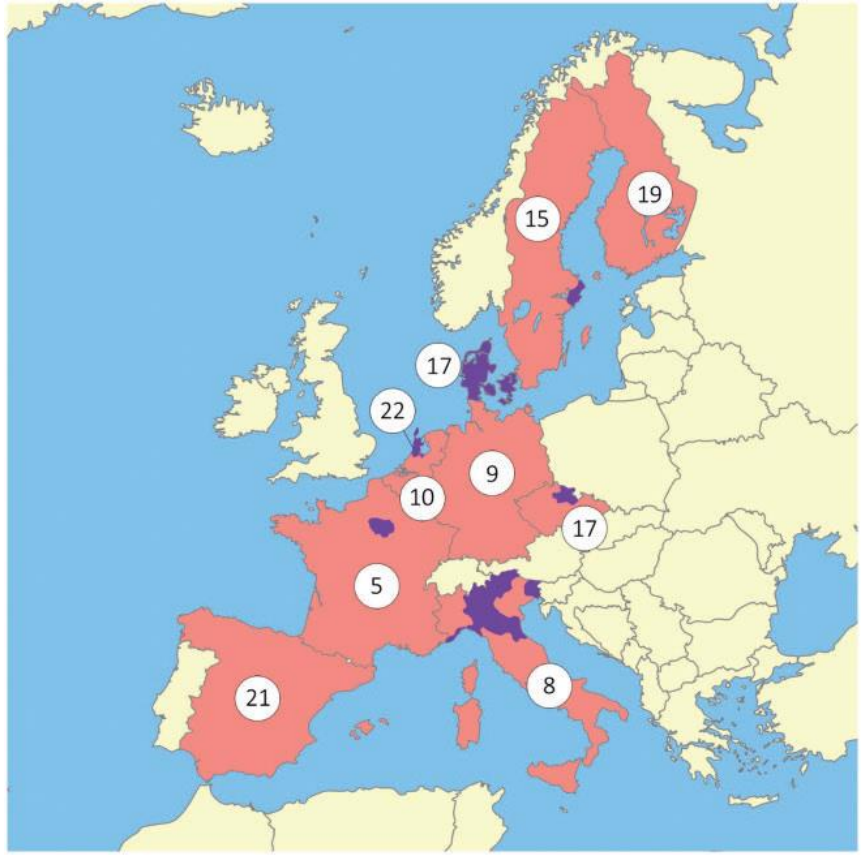
- Type 2 diabetes patients have a 2-3 fold increased risk of SCA + extensive GP files

Project 1: ESCAPE-NET

- EU Horizon 2020
- Consortium

Aim

1. Improve knowledge on determinants and mechanisms for the occurrence of sudden cardiac arrest (SCA)
2. Improve our capacities to increase survival on a EU scale



ARREST

Project 2: RESCUED

Funded by the Dutch Heart Foundation

Aims

1. To discover clinical predictors of SCA in DM through systematic studies of dedicated SCA and DM cohorts and GP files (data-mining);
2. To discover (molecular) mechanisms that underlie SCA risk in DM (genetics / metabolomics);
3. To recognize DM patients at increased risk sooner through the design of a risk score (using results from aims 1 and 2).

Ongoing / planned research

Ongoing:

- HbA1c – SCA in general population;
- Previous heart disease / treatment by cardiologist and cause of SCA in the general population and type 2 diabetes patients;
- Cumulative Comorbidity Index and risk of shockable initial rhythm.

Planned:

- Data-mining in GP files – case control study in type 2 diabetes patients.
- Circadian / septadian rhythm of SCA in type 2 diabetes patients.

Thanks for your attention!

ARREST