The MeFocc study

Susceptibility and outcome in invasive meningococcal disease in a genetically homogenous population

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Introduction

Invasive meningococcal disease (IMD) is a severe infection of the central nervous system that presents either as meningitis or sepsis. It is caused by meningococci, a type of bacteria commonly presented in the nasal and pharyngeal area, that become invasive and cause severe disease and death. Some people are more susceptible to the disease due to genetic aberrations involving the immune defense. Also, genetic defects affect the severity of the course of the disease. Both factors contribute to the outcome of the disease and several of the patients suffer from morbidity and difficulties in the years following the disease.

Objective

Obtaining a greater understanding of the susceptibility and outcome in IMD. Three substudies are planned:
1. Genealogy and genetics
2. Complement defects
3. Sequelae

Materials and Methods

Approximately 300 people had IMD in the Faroes in 1978-2014. These patients will be invited to a follow-up study involving clinical and neurological examination, ECG, blood and microbiological sampling. A subgroup will be invited to an MRI of the brain and a transthoracic echocardiography. A group of healthy individuals will be participating as controls in the studies.

Outcome

The Faroese population with its known homogenic genetic background is suspected of having a higher rate of inborn genetic defects related to susceptibility and outcome of IMD.

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