

Abstract

Atrial fibrillation is the most common arrhythmia occurring in the adult population. Sudden cardiac death is one of the most common causes of cardiovascular death, accounting for up to 50% of all cardiovascular deaths. A number of trials have investigated the association between atrial fibrillation and other heart diseases, including sudden cardiac death. Atrial fibrillation is increasing in prevalence and incidence in the population and is associated with higher morbidity and mortality in patients. The pathophysiological mechanisms in atrial fibrillation are very complex and are linked to a number of other diseases. With these diseases they may share a common background and may interact together. A higher incidence of atrial fibrillation is described especially in patients with coronary artery disease, heart failure, and arterial hypertension. Increased mortality or higher incidence of ventricular arrhythmias, including ventricular fibrillation, has been described in studies in ICD carriers, but also in the general population, where atrial fibrillation has been shown to be an independent risk factor associated with up to a 3-fold increased risk of AF.

This paper want to provide a comprehensive picture of the relationship between atrial fibrillation and sudden cardiac death. It provides information on the basic anatomy, physiology of the electrical activity of the heart, epidemiology and pathophysiology of atrial fibrillation and ventricular arrhythmias.

This theses aimed to analyse the prevalence of atrial fibrillation as a risk factor in patients after sudden cardiac arrest for ventricular fibrillation, which were hospitalized in our centre. We focused on the identification of other comorbidities and medications that may affect the issue. Another goal was to analyse trials presenting information on the interaction of atrial fibrillation and sudden cardiac death and trials presenting information on the potential benefit of early and individualized therapy for atrial fibrillation, with the impact of these therapy procedures on potential SCD risk reduction.

Keywords: atrial fibrillation, sudden cardiac death, ventricular fibrillation, epidemiology, mortality