Atrial Fibrillation
Inflammatory and pharmacological studies

av

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Akademisk avhandling

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Abstract


Background: Atrial fibrillation (AF) is the most common rhythm disorder. Many patients are symptomatic. Anti-arrhythmic pharmacological strategies have poor efficacy and side effects are common. Little information about the safety of anti-arrhythmic treatment, especially flecainide, is available. Thus, new pharmacological drugs with a well-documented safety profile are warranted.

Aims: To evaluate the extent and possible source of inflammation in AF. To evaluate the effect of atorvastatin on sinus rhythm (SR) maintenance following cardioversion (CV). To evaluate the safety and mortality of flecainide in patients with AF in a local cohort and nationwide in Sweden.

Materials and methods: I - Inflammatory markers in the vessels and different locations in the heart of patients with AF were compared to controls. II - A total of 234 patients with persistent AF were randomised to atorvastatin or placebo prior to CV. III - A local cohort of AF patients treated with flecainide (n=112) were studied, focusing on sudden cardiac death and pro-arrhythmia. IV - We evaluated whether current flecainide practice in Sweden is associated with increased mortality compared to a reference AF population receiving beta-blockers only.

Results: No association was found between local inflammation in the heart and AF except for elevated levels of IL-8 in persistent AF. Atorvastatin was not superior to placebo with regard to maintaining SR 30 days after CV. We found a relatively high incidence of cardiovascular death, including sudden cardiac death and pro-arrhythmia in the cohort of flecainide-treated AF patients in Örebro. However, in the nation-wide registry study, flecainide was not associated with increased mortality in patients with AF compared to patients on beta-blockers only.

Conclusions: No association was observed between local inflammation in the heart and AF. Atorvastatin does not have the potential to be a novel treatment strategy for maintaining sinus rhythm after CV. On a population basis, flecainide is not associated with increased mortality. However, the risk/benefit ratio for the individual may be in question and contraindications for the drug should be respected.

Keywords: atrial fibrillation, inflammation, randomised, sudden cardiac death, pro-arrhythmia, anti-arrhythmic, statin, atorvastatin.

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