

Title: Statins use and new-onset arrhythmia

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Abstract:

Background With the rapid development of medical technology and standard of medical care, many diseases are well-controlled, but some diseases still cause high mortality. For example, arrhythmia, atrial fibrillation(AF), stroke , etc.Methods Taiwan's National Health Insurance database for 2010 were analyzed to study the correlation between statin and arrhythmia. It was performed on patients without arrhythmia since 2004. The 6 statins were atorvastatin, rosuvastatin, fluvastatin, lovastatin, pravastatin and simvastatin, were tracked from January 1, 2004 to December 31, 2013. Cox proportional hazard model and Kaplan-Meier survival curve were used to calculate between statins and arrhythmia.Results A total of 29,003 patients were included in this study, of whom 4,434 were arrhythmic. There were 1,761 people with statin and 2,673 statins-free . Atorvastatin after adjustment for gender and comorbidity, HR (hazard ratio) = 0.800, 95% CI (confidence interval) = 0.719-0.890, P < 0.0001. Rosuvastatin after adjustment for gender and comorbidity, HR= 0.785, 95% CI= 0.692-0.891, P=0.0002. Fluvastatin after adjustment for gender and comorbidity, HR= 0.739, 95% CI=0.612-0.894, P=0.0018.They can reduce the incidence of arrhythmias.Conclusion Atorvastatin, Rosuvastatin and Fluvastatin have a significant correlation with reducing the risk of new onset arrhythmia.References Arrhythmia National Heart, Lung, and Blood Institute (NHLBI)20122. Inaba, O., et al., Atrial fibrillation type matters: greater infarct volume and worse neurological defects seen in acute cardiogenic cerebral embolism due to persistent or permanent rather than paroxysmal atrial fibrillation. Europace, 2017.3.CECILIA GUTIERREZ, M., and DANIEL G. BLANCHARD, MD, , Diagnosis and Treatment of Atrial Fibrillation. American Academy of Family Physicians, 2016. 94(6): p. 443-452.January, C.T., et al., 2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association Task Force on practice guidelines and the Heart Rhythm Society. Circulation, 2014. 130(23): p. e199-267.Lipoproteins, A., et al., Association of apolipoprotein B and nuclear magnetic resonance spectroscopy-derived LDL particle number with outcomes in 25 clinical studies: assessment by the AACC Lipoprotein and Vascular Diseases Division Working Group on Best Practices. Clin Chem, 2013. 59(5): p. 752-70.Stroes, E.S., et al., Statin-associated muscle symptoms: impact on statin therapy-European Atherosclerosis Society Consensus Panel Statement on Assessment, Aetiology and Management. Eur Heart J, 2015. 36(17): p. 1012-22.Chitose, T., et al., Effect of a hydrophilic and a hydrophobic statin on cardiac salvage after ST-elevated acute myocardial infarction - a pilot study. Atherosclerosis, 2014. 237(1): p. 251-8.Tze-Fan Chao,et al., Predictors of Nonuse of a High-Potency Statin After an Acute Coronary Syndrome, J Am Heart Assoc. 2017;6:e004332. DOI: 10.1161/ JAHA. 116.004332.31. Stone, N.J., et al., 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Circulation, 2014. 129(25 Suppl 2): p. S1-45.Barkas, F. and M. Elisaf, National hyperlipidemia management policies improve lipid target attainment in clinical practice. Curr Med Res Opin, 2017: p. 1-3.Wurtz, P., et al., Metabolomic Profiling of Statin Use and Genetic Inhibition of HMG-CoA Reductase. J Am Coll Cardiol, 2016. 67(10): p.

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