Research Round up June- Statins

Introduction

Last month the research round-up provided you with an overview of articles looking at the emerging concept of green and sustainable prescribing. This month we look at statin prescribing practice. The first article looks at the effects of nudges to improve statin prescribing, the second looks at lack of statin therapy after ischaemic stroke and finally an article looking at statins as primary prevention in the over 80 years age group.

Effect of Nudges to Clinicians, Patients, or Both to Increase Statin Prescribing: A Cluster Randomized Clinical Trial

Adusumalli, S., Kanter, G.P., Small, D.S. *etal* JAMA Cardiol. 2023;8(1):23-30. doi:10.1001/jamacardio.2022.4373

This Article in the journal JAMA Cardiology presents the findings of a cluster randomised clinical trial involving 4131 patients from 28 primary care practices and 158 clinicians between October 2019 and April 2021. There was a data collection of 12 months prior to the intervention commencement and then 6 months collection of intervention data. The researchers sought to evaluate whether the use of nudges increased the commencement of statin prescriptions during primary care consultations. These nudges took the form of active choice prompts in electronic systems for the clinicians during the consultation and monthly feedback to them comparing their prescribing patterns with that of their peers. The patient nudges took the form of interactive text messages sent to the patients phone prior to their booked appointments. The control group received no nudges and received usual care. Demographic data was also collected. In the 12 month pre intervention period statin prescribing was to 5.6% of attending patients in the usual care group, 4.8% in the patient nudge group and 6% in the clinician nudge group. The group where clinicians and patients were to receive a nudge saw prescription rate of 7.3%. During the intervention period the usual care group of patients were prescribed for in 7.3% of attendances and the patient nudge group saw a rise in initiation to 8.5% of patients. In the clinician nudge group, prescribing was raised to 13% and where clinician and patient received nudges the prescribing rose to 15.5%. The authors conclude that nudges to clinicians with and without patient nudges significantly increases the rate of prescribing a statin in primary care. The suggest the patient nudge alone was no more effective that the usual care group.

https://jamanetwork.com/journals/jamacardiology/article-abstract/2798971

Lack of Statin Therapy and Outcomes After Ischemic Stroke: A Population-Based Study

Aivo, J., Ruuskanen, J.O., Torino, A., Rautava, P. & Kyto, V. (2023) Stroke. 54:3 781-790.

This article published in the journal Stroke aimed to assess the impact of non-statin compliance after ischaemic stroke on adverse outcomes. The authors start by outlining the benefits of statin use in preventing adverse vascular outcomes in patients who have suffered and ischaemic stroke. The study was conducted in Finland and included 59588 patients who had been admitted with ischaemic stroke over 20 different hospitals. The primary outcome measure was how many patients were or were not using prescribed statins within the 90 days following hospital discharge. Ongoing statin use was also evaluated at 90-day intervals. The median patient follow up was 5.7 years with the whole study looking at a 12-year period. Data analysis revealed that withing the immediate 90-day period

after discharge from hospital following ischaemic stroke, 27.1% of patients were not using statin therapy and that in the female population and the older patient this was more noticeable in that they used them less often. The average proportion of people without ongoing statin use over the 12-year period was 36%. Outcome data suggested that people who went without statins in the early period following stroke had a higher all-cause mortality that the statin consuming patients (7.5% as oppose to 4.4%). At the one-year interval the cumulative incidence of major adverse cerebrovascular or cardiovascular events was significantly higher in those who had not used early statin therapy. They also saw that cardiovascular death, recurrent ischaemic stroke and myocardial infarctions were also higher in the non-use group. The authors conclude that lack of statin treatment, particularly in the 90 days immediately after discharge following ischaemic stroke is associated with adverse long-term outcomes. They suggest that measures to improve statin prescribing are needed.

https://www.ahajournals.org/doi/abs/10.1161/STROKEAHA.122.040536

Statins in Primary Prevention in People Over 80 Years

Marcellaud, E., Jost, J., Tchalla, A., Magne, J. & Aboyans, V. (2023) The American Journal of Cardiology 187: 62-73.

This article published in the American Journal of Cardiology sought to investigate statin use as primary prevention in the over 80 years population. Three systematic reviews were conducted by the authors using the 2020 PRISMA statement. The aims of the reviews were firstly to determine the impact of hypercholesterolaemia on mortality and major adverse cardiovascular events in subjects >80 years. Secondly to assess the efficacy of statins to prevent cardiovascular events at this age and finally to review the safety and tolerance of statins in this population. Relevant databases were used and rigorous search strategies employed to yield the articles eventually selected for review. With regard to the impact of hypercholesterolaemia, 16 studies were included encompassing 121,250 patients. In seven of those studies there was no findings of increased major adverse events in the over 80 age group. Six studies found increased levels of cholesterol were associated with adverse event whereas three studies found that there were increased adverse events at lower levels of serum cholesterol. With regard to the efficacy of statins in prevention at this age 8 studies covering 436,005 patients were included in the review. Most of these studies did not find that statin use provided a decrease in the risk of major adverse events in this population. The final outcome around tolerance and safety included 9 studies covering 217,088 patients. The main side effects uncovered were muscular problems, issues with hepatic function and gastrointestinal disorders. These events were noted to be more frequent in the younger of the population studies. The authors conclude that there in no real convincing evidence of the benefit of statin use in preventing adverse events in the over 80 population. They suggest prescribing in this age group should be considered on a case-by-case basis and encompassing other risk factors and comorbidities and also looking at life expectancy.

https://www.sciencedirect.com/science/article/abs/pii/S000291492201075X

Conclusion

Statin prescribing is often a controversial topic and some are wary of the evidence supporting its use in certain conditions and age groups due to the risk over benefit situation. Prescribers should use guidelines to assist with their decision making but also their own clinical judgement in conjunction with patient centred consultation to assess the risk versus benefit on a case-by-case basis.