Research Round up June 2024 – Tafamidis Use in Amyloid Cardiomyopathy.

Introduction

Last month the research round-up provided you with an overview of articles looking at a range of prescribing practices around antibiotics. This month we look at three articles for a drug newly recommended to the UK prescribers for amyloid cardiomyopathy. The first article is a study of real-world treatment patterns in a German based study. The second article examines tafamidis efficacy in octogenarians with amyloid cardiomyopathy. In our final article we will look at temporal outcomes of patients with amyloid cardiomyopathy.

Tafamidis 61 mg Patient Characteristics and Persistency? A Retrospective Analysis of German Statutory Health Insurance Data (IQVIA™ LRx)

S Attal, J Kemner, J Alvir, S Barth & S Schuessler (2024) *Tafamidis 61 mg Patient Characteristics and Persistency? A Retrospective Analysis of German Statutory Health Insurance Data (IQVIA™ LRx)* Cardiology & Therapy 13:369-378.

This study, published in the journal Cardiology and Therapy, sought to determine real world prescribing patterns of tafamidis with respect to patient characteristics and persistency. Using a non-interventional, retrospective, observational cohort study methodology the researchers accessed data from the German IQVIA LRx database. This database contains anonymised data around patient-level prescriptions for those with statutory health insurance. After extraction of data on patients aged over 18, who had received at least one prescription for tafamidis 61mh between March 2020 and August 2022, 1565 patients were identified. Baseline characteristics of those included showed that the mean age was 78.3 years and 82.4% were male. This is in line with the disease characteristics of amyloid cardiomyopathy which was the indication of interest to the researchers.

Using descriptive statistical analysis, results showed that patient adherence to the medication was good, with over 94% of patients showing an adherence rate of at least 80%. The research team also looked at concomitant medication use during the period the patients were commenced on tafamidis. Analysis showed that after starting tafamidis, there was a significant decrease in concomitant use of beta blockers and statins, but there was no change in loop diuretic use. The other most common concomitant medication, direct factor Xa inhibitors, actually increased in use over the study period.

The authors conclude that the high persistence suggests this is an indicator of safety and ease of use which are important factors in disease management. They also suggest that changes in other drugs used shows effectiveness of tafamidis and a need for medication optimization after commencement.

file:///C:/Users/nus776/Downloads/s40119-024-00365-6.pdf

Tafamidis Efficacy Among Octogenarian Patients in the Phase 3 ATTR-ACT and Ongoing Long-Term Extension Study

P Garcia-Pavia, M B. Sultan, B Gundapaneni, Y Sekijima, F Perfetto, M Hanna & R Witteles (2024) *Tafamidis Efficacy Among Octogenarian Patients in the Phase 3 ATTR-ACT and Ongoing Long-Term Extension Study* JACC: Heart Failure: 12 (1) 150-160

This article, published in the journal JACC: Heart Failure, sought to explore the long term benefits of tafamidis treatment in patients in their eighties who had been diagnosed with amyloid cardiomyopathy. Employing a post hoc analysis approach, data from an international, multi-centre, double-blind, placebo controlled, randomised phase 3 trial of patients with transthyretin amyloid cardiomyopathy (ATTR-CM) was used. This trial (ATTR-ACT) randomised either tafamidis 80mg, tafamidis 20mg or placebo and took place over 30 months before an invitation to join a long-term extension study where all patients received tafamidis for up to an additional 60 months. This post hoc analysis study examined the data from those randomised to 80mg tafamidis or placebo only. Outcome measures of interest were changes from baseline in a 6-minute walk test, changes in levels of N-terminal pro-B-type natriuretic peptide as well as any changes from baseline in the Kansas City Cardiomyopathy Questionnaire Overall Summary tool. Additionally, the researchers looked at the mean rate of cardiovascular related hospitalisations. In total the data of 441 patients was retrieved. Of these eligible, 51 of 176 patients receiving tafamidis 80mg and 37 of the 177 receiving placebo were in their eighties and were included in the study. After 30 months in the original study, patients aged in their eighties showed signs of disease progression attenuation by the tafamidis treatment. In the 6-minute walking test, all groups showed a decrease, but this decrease was significantly reduced in the participants randomised to tafamidis. For the N-terminal pro-B-type natriuretic peptide, all groups showed an increase however this was again less marked in those on tafamidis. The Kansas City Cardiomyopathy Questionnaire Overall Summary declined in all groups but tafamidis treatment was associated with a smaller decline versus placebo. In those aged over 80 tafamidis treatment was also associated with s significantly lower rate of cardiovascular related hospitalisations. In the 60-month long term extension participants aged in their eighties treated continuously with tafamidis showed a significantly smaller decline and showed a longer median survival of 45 months compared to 27 months. Similar trends were seen in the other outcomes measures.

The authors conclude that tafamidis treatment in octogenarians is efficacious and improves long term outcomes for patients with amyloid cardiomyopathy.

https://www.jacc.org/doi/epdf/10.1016/j.jchf.2023.08.032

Temporal Outcomes of Patients Diagnosed With Transthyretin Cardiac Amyloidosis

N. Chan, , S Teruya , A Mirabal , A Y Weinsaft,
J DeLos Santos , S Guadalupe, M Jiminez , C Rodriguez, S Helmke, M Cuomo, D Smiley & M
S Maurer (2024) *Temporal Outcomes of Patients Diagnosed With Transthyretin Cardiac Amyloidosis* J Cardiac Failure *in press 00:1-8*

This article, currently in press and available online in the Journal of Cardiac Failure, sought to evaluate clinical outcomes over time in patients with amyloid cardiomyopathy who were suitable for disease modifying therapy. Using a retrospective cohort study approach, the researchers used data obtained from the Columbia University Medical Centre of 419 patients between 2001 and 2021. These participants gave informed consent for their data to be examined. Those included were stratified by their era of diagnosis into three groups according to the type of scanning used for diagnosis. These groups were pre-PYP era (2001-2013), early PYP era (2014-2016) and contemporary PYP era (2017-2021). For each group baseline data was collected from records of the initial diagnostic consultation and included demographic data, cardiovascular comorbidities, medications, laboratory results and ECG data as well as baseline vital signs and recording of any implanted devices.
Analysis revealed that the contemporary PYP group were older with a mean age of 78 years as opposed to 75 in the early PYP era and 74 in the pre-PYP era groups. Baseline medications showed less common use of loop diuretics in those diagnosed during the more recent eras, a marker of a less severe disease. Laboratory results showed that the contemporary PYP era group had better renal function and less cardiac biomarkers and less of this group had progressed to an advanced stage of the disease. Over time, tafamidis became the treatment drug of choice with 230 of the 419 patients prescribed the drug.
The authors conclude that over time, increased use of contemporary PYP scanning and greater awareness has enabled diagnosis of transthyretin cardiac amyloidosis at earlier disease staging, allowing more timely interventions and lowering mortality. This is also true of patients treated with tafamidis which was found to be protective from death and heart transplantation.

https://www.sciencedirect.com/science/article/abs/pii/S1071916424000733

Conclusion

New drugs, or new generations of drugs or different indications for drugs are common for the prescriber to encounter. Use of guidance and local and national policies can inform prescribing practice but visiting original research looking at the drug, its target population and the prescribing patterns can be extremely insightful for the prescriber expanding their scope into a new area of practice.