



RACP Foundation Research Awards

YEAR 1 PROGRESS REPORT

Project / Program Title	Strategies to improve vascular access outcomes in haemodialysis	
Name	Dr Andrea Katharina Viecelli	
Award Received	2016 RACP NHMRC Jacquot Award for Excellence	
Report Date	30 January 2017	
Chief Investigator / Supervisor	A/Prof Carmel M Hawley	
Administering Institution	The University of Queensland	
Funding Period	Start Date:	1 February 2016
	Finish Date:	12 August 2018

PROJECT SUMMARY

This project explores strategies to improve vascular access outcomes in haemodialysis patients. It involves analysis of the FAVOURED (Fish oil and Aspirin in Vascular access outcomes in REnal Disease) trial, the largest randomised controlled trial investigating whether fish oil supplementation or aspirin use will reduce failure rates of newly created arteriovenous fistulae (a surgically created connection between artery and vein), a systematic review and meta-analysis on fish oil to prevent vascular access failure, a registry analysis of the Australian and New Zealand Dialysis and Transplant (ANZDATA) registry to determine predictors for initiating haemodialysis with a fistula, and establishment of a core outcome measure for haemodialysis vascular access that is important to all stakeholders and should be measured across all trials in haemodialysis to help improve evidence-based decision making in clinical care and patient outcomes.

PROJECT AIMS / OBJECTIVES

PART 1: Epidemiology of Vascular Access in the Australian and New Zealand Haemodialysis Population from 2004 to 2015 Exploration of Patient- and Centre-level Factors (Study 1)

Aim: To identify patient and centre factors associated with initiating HD with an AVF compared with other access types in ANZ to enable identification of barriers to achieving dialysis initiation with an AVF.

PART 2: Determining whether fish oil or aspirin is effective in preventing complications of new AVF

PART 3: Establishing standardised core outcome measures for vascular access for clinical trials in haemodialysis

Aim: To develop core outcome measures for vascular access complications in HD as part of the Standardised Outcomes in Nephrology – Haemodialysis (SONG-HD).

SIGNIFICANCE AND OUTCOMES

This project will contribute to our understanding of factors that enhance the possibility to start haemodialysis with the and AVF as the preferred access; it will determine whether fish oil or aspirin use is effective in reducing AVF complications and it is expected to enhance the quality of clinical research by establishing and implementing a core outcome measure for haemodialysis vascular access that is considered important by all stakeholders, including patients and their clinicians. Implementation of a core outcome measure across all clinical trials in haemodialysis will ensure vascular access outcomes will be measured consistently which will improve the comparability of results across trials and hence the evidence-based decision making in clinical care and patient outcomes.

PUBLICATIONS / PRESENTATIONS

Publications:

Irish AB*, Viecegli AK*, Hawley CM, Hooi LS, Pascoe EM, Paul-Brent PA, Badve SV,, Mori TA Cass A, Kerr PG, Voss D, Ong LM, Polkinghorne KR, for the Omega-3 Fatty Acids (Fish Oils) and Aspirin in Vascular Access Outcomes in Renal Disease (FAVOURED) Study Collaborative Group. The omega-3 fatty acids (Fish oils) and Aspirin in Vascular access OUtcomes in REnal Disease (FAVOURED) study a randomized placebo-controlled trial. JAMA Internal Medicine [in print]

*Equal first authors

AK Viecegli, EM Pascoe, KR Polkinghorne, CM Hawley, PA Pou/Brent, SV Badve, A Cass, DW Johnson, PG Kerr, TA Mori, A Scorio, SL Hooi, ML Ong, AB Irish; FAVOURED study team. Updates on baseline characteristics of the omega-3 fatty acids (Fish oils) and Aspirin in Vascular access OUtcomes in REna/ Disease (FAVOURED) study. Nephrology, 2016 [Epub ahead of print]

AK Viecegli, EM Pascoe, KR Polkinghorne, CM Hawley, PA Pou/Brent, SV Badve, A Cass, DW Johnson, PG Kerr, TA Mori, A Scorio, SL Hooi, ML Ong, AB Irish; FAVOURED study team. Baseline characteristics of the omega-3 fatty acids (Fish oils) and Aspirin in Vascular access OUtcomes in Renal Disease (FAVOURED) study. Nephrology, 2015 [Epub ahead of print]

AK Viecegli, E Pascoe, KR Polkinghorne, C Hawley, PA Paul-Brent, SV Badve, A, S Cass Heritier, PG Kerr, TA Mori, A Robertson, HL Seang, AB Irish. The Omega-3 fatty acids (Fish Oils) and Aspirin in Vascular access outcomes in REnal Disease (FAVOURED) study: the updated final trial protocol and rationale of post-initiation trial modifications. BMC Nephrol. 2015; 16: 89.

Abstracts

Viecegli A, Pascoe E, Polkinghorne K, Paul-Brent P, Darssan D, Hooi L, Ong L, Mori T, Badve S, Cass A, Kerr P, Voss D, Hawley C, Johnson D, Irish A, for the Omega-3 Fatty Acids (Fish Oils) and Aspirin in Vascular Access Outcomes in Renal Disease (FAVOURED) Study Collaborative Group. Comparison of arteriovenous fistula failure between Malaysian and Australian and New Zealand participants enrolled in the FAVOURED trial. Nephrology, 2016; 21(S2):115, Abstract

Irish A, Viecegli A, Hawley C, Hooi L, Pascoe E, Paul-Brent P, Badve S, Mori T, Cass A, Kerr P, Voss D, Ong L, Polkinghorne K, for the Omega-3 Fatty Acids (Fish Oils) and Aspirin in Vascular Access Outcomes in Renal Disease (FAVOURED) Study Collaborative Group. Effect of Fish Oil and Aspirin on Arteriovenous Fistula Failure in Haemodialysis - A Randomized Controlled Trial. Nephrology, 2016; 21(S2):47, Abstract

AK Viecec, EM Pascoe, KR Polkinghorne, CM Hawley, PA Paul-Brent, SV Badve, A Cass, DW Johnson, PG Kerr, TA Mori, A Scaria, SL Hooi, ML Ong, AB Irish; FAVOURED study team. Baseline characteristics of the omega-3 fatty acids (Fish oils) and Aspirin in Vascular access Outcomes in REnal Disease (FAVOURED) study. 9th International Congress of the International Society for Hemodialysis; Poster 064

Facilitating work-shops for the SONG-HD

Presenting at conferences including

- International Congress of the International Society for Hemodialysis, Kuala Lumpur 2015: Poster presentation ANZSN, Perth 2016: Winner of the KHA clinical award session (FAVOURED main outcomes, study 5) and mini-oral for study 3)

Invited speaker

- Strategies to improve vascular access outcomes – past present and future (Prince of Wales Hospital, Sydney, Australia)
- Looking back and moving forward - the FAVOURED trial (Australasian Kidney Trials Network Scientific Committee Meeting, Brisbane, America) Rese

Future participation at national and international conferences and invited speaker

Submitted abstracts to ERA-EDTA, Madrid 2017:

1. DEVELOPING A CORE OUTCOME MEASURE FOR VASCULAR ACCESS FOR TRIALS IN HAEMODIALYSIS: AN INTERNATIONAL MULTISTAKEHOLDER CONSENSUS WORKSHOP
2. DEVELOPING CORE VASCULAR ACCESS OUTCOMES FOR TRIALS IN HAEMODIALYSIS: AN INTERNATIONAL MULTISTAKEHOLDER SURVEY
3. EFFECTS OF FISH OIL SUPPLEMENTATION AND ASPIRIN USE ON ARTERIOVENOUS FISTULA PATENT, NEED FOR INTERVENTIONS AND DIALYSIS SUITABILITY IN PATIENTS REQUIRING HAEMODIALYSIS - POST HOC ANALYSIS OF THE FAVOURED STUDY
4. OMEGA-3 PUFA SUPPLEMENTATION TO PREVENT ARTERIOVENOUS FISTULA AND GRAFT FAILURE: SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS
5. REGIONAL DIFFERENCES IN ARTERIOVENOUS FISTULA FAILURE OBSERVED IN THE FAVOURED TRIAL
6. VASCULAR ACCESS OUTCOMES REPORTED IN RANDOMISED TRIALS CONDUCTED IN PATIENTS REQUIRING HAEMODIALYSIS: A SYSTEMATIC REVIEW