

Heart Research

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Heart Research Centre Training Program: focus on rural health professionals

The Heart Research Centre was delighted to receive a grant recently from the Hugh Victor McKay Charitable Trust for a project entitled "Education, training and support of health professionals conducting cardiac rehabilitation and prevention programs".

The aim of the project is to produce a manual containing resource materials for health professionals, particularly those in rural areas. The Heart Research Centre conducts 10 or more training programs each year which provide up to date information about heart disease and other chronic diseases. Courses have a practical focus. They aim to equip health professionals with the necessary knowledge and skills to help patients recover after an acute cardiac illness and to prevent further heart problems. Participants learn how to conduct outpatient group programs based upon exercise, education and support.



*Ms Cathy Newell
Horsham, Victoria*

Health Care Group, Horsham. Cathy is a nurse with a strong background in aged and community care. Cathy attended the course to assist her to help the clients whom she saw with chronic heart failure. She was keen to improve both their quality of life and to reduce unplanned hospital readmissions. She wanted to learn more about the latest developments in the diagnosis and management of chronic heart failure and to update her acute nursing skills and knowledge.

Cathy said that she felt quite isolated at times and attending the courses provided by the Heart Research Centre gave much needed opportunities to improve her practice and stay in touch with the latest information and research findings. Another benefit that Cathy saw as a very important part of the training session, was meeting other participants and gaining other perspectives, that helped her assist her clients more effectively.

In some rural areas, patients are given a program to follow at home. Where possible, patients are followed up by telephone.

A significant number of participants attending the training programs come from rural and regional Victoria, both from acute care and community care settings. Participants from these areas often lack sufficient resources. The new manuals will contain material relevant to all practitioners, but there will be a strong emphasis upon resources relevant to patients living in more remote or isolated areas. As well as producing the manual, the project will involve its distribution during training programs and assessment of its effectiveness during follow-up telephone interviews with the course participants. The training of health professionals working in rural areas is especially important because the rate of cardiovascular disease and mortality have been demonstrated to be higher in rural areas compared with urban areas, both in Australia and elsewhere.

One of the rural practitioners at a recent training program concerning the management of patients with chronic heart failure was Ms Cathy Newell, who works with the Hospital Admission Risk Program within the Wimmera

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Warfarin: an anticoagulant or “blood thinner”

The widely used drug Warfarin is often referred to as a “blood thinner”. It does not thin the blood; it stops blood from clotting. It is not like a paint thinner or liquid paper thinner. It is a drug which blocks specific processes within the body, interfering with the availability of Vitamin K. It is therefore referred to as a Vitamin K antagonist. Vitamin K is essential for the proper formation of blood clots. An under-dose of Warfarin will not stop blood from clotting. Taken in overdose, bleeding may occur at any susceptible site in the body.

Background

Fifty years ago, a famous London cardiologist (with the voice of a Welsh preacher) giving a medical lecture in the USA, startled his audience, opening his address thus- “Anticoagulants?- rat poison!” Warfarin in large dose (for rats and mice) is indeed a highly effective rodent poison. The rodents bleed to death. What is a proper human dose?

How is Warfarin taken?

Human administration needs to be adjusted to ensure that the level of effect lies in a range between where the dose is effective and where it should not lead to unwanted bleeding. Laboratory tests give us the measure of effectiveness in an individual patient on a specific day. The measure is called the prothrombin time (PT) or is converted to the International Normalised Ratio (INR). The normal INR is 1. The therapeutic range of INR is usually 2 to 3.

Warfarin is taken in tablet form. In Australia, there are two major preparations, Coumadin and Marevan. They are not quite interchangeable and caution is required in prescribing by the doctor and dispensing by the pharmacist. Both drugs come as 1 mg and 5 mg tablets, but Coumadin is also available as a 2 mg tablet, while Marevan is available as a 3 mg tablet.

Blood tests

Samples of blood are required for laboratory testing every couple of days when the drug is first introduced. We all vary in our response to the drug (as determined by PT or INR values). When the required level is achieved, tests may initially be on a weekly basis for the first month or so, and then monthly thereafter. Long term regular testing is needed for several reasons. There may be interactions with other drugs introduced for some different purpose. Patients must be careful when taking complementary therapies: the effects of Warfarin are increased by ginger, garlic and ginseng. Other herbal treatments may also interfere with the effectiveness of the drug. PT and INR are also influenced by Vitamin K intake in certain foods. A list of foods which may interfere with the effects of Warfarin may be available with the tablets, or from the pharmacist, or prescribing doctor. Most people achieve the desired level of PT or INR and maintain it with a steady dose thereafter, provided that they have regular habits, controlled alcohol consumption (alcohol increases the anticoagulant effect of Warfarin) and no wild changes in diet.

Who is prescribed Warfarin?

Some people need an anticoagulant on a long term or permanent basis. This long term medication is usual for people who are likely to develop blood clots within the heart. The drug is commonly used in those who have the pulse irregularity of atrial fibrillation, those with established chronic heart failure who are breathless and have enlarged heart chambers, those with valve abnormalities and an enlarged heart and those who have artificial heart valves (prostheses) replacing previously damaged, narrowed or leaking heart valves. All of these conditions are much more common amongst the elderly, a rapidly increasing portion of the population. Thus medication with Warfarin is also increasing rapidly. Does that matter? Yes, it does. The older one is, the more likely the blood vessels are to be damaged easily, such that bleeding may occur anywhere. Bleeding may be into the stomach if there is an ulcer, into the urine if there is a kidney stone, into the bowel or into the brain causing a stroke if the blood pressure is high. Thus we have increasing risk of bleeding with advancing age, increasing risk of blood clotting with advancing age, increasing sensitivity to drugs including Warfarin with advancing age and increasing chance of drug interactions with advancing age as we take more medications for other conditions related to ageing. This seems to present a dilemma, a medical balancing act. It is not too bad. Blood tests reveal any trends in PT or INR to be changing (one way or the other). If the PT and INR is too low, the Warfarin dose is increased. If the PT or INR is too high, the Warfarin dose can be reduced: also there is an antidote- Vitamin K by injection.

Some people require Warfarin for a period of only weeks or months. These include those with deep vein thrombosis (DVT) in the legs or elsewhere and people who have had a blood clot move from the leg to the lung, or a similar problem.

Is Warfarin effective and truly valuable?

In the face of all of the above, does Warfarin treatment have overriding benefit? The answer is yes, it does. Fully controlled, the drug markedly reduces the formation of blood clots in the heart and the risk of subsequent stroke or other crises owing to a portion of blood clot coming free and lodging in the brain or elsewhere. Fully monitored and properly controlled, the gains for the many far outweigh the possible hazards for the few. Is this another balancing act? No, this is good preventive medicine and patient care. Like all medications, Warfarin should be prescribed, dispensed, monitored and controlled properly.

Good luck, I hope you will not need it!



*Dr Alan Goble
Cardiology
Consultant*

The views expressed are those of the author and not necessarily those of the Heart Research Centre.

Cognitive behavioural therapy at The Royal Melbourne Hospital

Funded by a grant from the Australian Rotary Health Research Fund in 2006, the Heart Research Centre recently began a new study to see whether a program conducted with groups of cardiac patients would help them to adjust emotionally after their cardiac illness. The program helps patients to deal with anxiety, depression and anger, feelings which are very common in the weeks and months after a cardiac event. The program also encourages patients to adopt healthier lifestyles with attention to diet and physical activity.

For the past six months, the program has been running as a 'pilot study', funded by a generous bequest of \$25,000 from Mrs Margaret Elizabeth Burdett. During the pilot phase of the study, we telephoned participants to find out their impressions of the program. The feedback overall was very favourable. Many patients indicated that the program was just the thing they needed to help them get back on their feet. One patient stated: "It was so well timed, it was something that I really wanted to go to and needed to do". Patients said that the program helped them cope with feelings of anxiety, anger and depression: "it helped me deal with my fears and showed me how to control my anger" and "it gave me that boost I needed". Another patient highlighted that the program was helpful for his whole family: "It was great in every way. I'm prepared for the future for my life and health, not only mine but my family as well". Many patients enjoyed the support and companionship of being in a group with other patients: "When we told our own stories, it brought a few truths home. As soon as others talked about their thoughts or feelings, I realised that I felt the same". Another commented: "You know you are in the same boat". Many said that they continue to refer to the reading material provided: "I keep that book in a good place to get at and often go back and read about it all".

The next phase of the project is a randomised controlled trial which recently began. Patients' risk factors are being assessed before the program and after four and twelve months. A screening clinic has been set up to measure cholesterol, blood pressure, weight and other risk factors. Quality of life, dietary habits and physical activity levels are also being monitored. We have appointed additional staff to conduct the screening clinics and administer questionnaires to patients. During the study period, the program is being offered to patients at The Royal Melbourne Hospital, the Melbourne Private Hospital and John Fawcner Hospital and runs alongside traditional cardiac rehabilitation programs. If the three-year study provides positive findings, we anticipate that the program will be offered in more hospitals throughout Victoria.

Bequest made to the Heart Research Centre




*Dr Goble and Dr Worcester with
Mrs Burdett and Mr Parkinson*


Recently the Centre received a significant bequest from the Estate of Margaret E Burdett. The trustees, Mr and Mrs Parkinson, particularly wanted to present it at the Heart Research Centre in person so they could tell us about the special person that Mrs Burdett was.


Mrs Margaret Elizabeth Burdett, "Bessie" to her friends, lived a long and full life, marrying and raising two healthy sons while her husband established a successful business. Sadly Mrs Burdett was predeceased by her husband and both sons. She must have been a woman of great courage and compassion and it was her wish that on her death others would be helped. Her estate was divided between three charities, of which the Heart Research Centre was one.

Mr and Mrs Parkinson said that Mrs Burdett had expressed her wish to support the work of the Centre on many occasions during her life.

ARE YOU AWARE:

 Disease of the heart or blood vessels cardiovascular disease accounts for _____ of deaths in Australia.

 Doing moderate exercise greatly reduces your risk of coronary heart disease.

 Over one million Australians are living with the effects of cardiovascular disease.

