

Lay Summaries for CNTN Research Symposium

A clinical trial to determine if nabilone improves symptoms of itch in patients on dialysis – Dr. David Collister

Lay Abstract: Itching associated with kidney disease affects more than half of patients on dialysis. It is a top research priority because of its negative impact on quality of life. Why itching is so common in patients on dialysis is not fully understood but it is likely due to changes in skin and the build-up of toxins normally cleared by the kidney that cause brain and nerve dysfunction and a hyperactive immune system.

Several therapies have been studied to reduce itching in dialysis patients but most clinical trials evaluating these treatments have been small with design issues resulting in bias and uncertainty about how well these drugs actually work. Medications thought to be effective are limited by their side effects which are common even with appropriate dosing. Even with effective treatments, residual, bothersome itch is common.

Cannabis has been used to treat other skin disorders such as eczema, psoriasis and chronic itch. It has been shown to decrease skin irritation and swelling by dampening the immune system and by modifying itch pathways. DISCO-POT will compare oral nabilone taken by mouth nabilone to placebo (a non-active drug that looks, smells and tastes the same as the real drug) to determine if nabilone is safe and effective at reducing symptoms of itch in patients on dialysis. Nabilone is a synthetic form of cannabis that mimics the actions of tetrahydrocannabinol (THC), the main drug that is in cannabis. Patients and their physicians will not be aware of which treatment they are receiving (i.e. they are “blinded”) until the end of the study.

CENTral blood pressure Targeting: A pragmatic Randomized pilot trial in advanced Chronic Kidney Disease (CENTRAL-CKD) – Dr. Rémi Goupil

Lay Abstract: In patients with the most severe form of chronic kidney disease (CKD), blood pressure (BP) control can be difficult as the margin of error between a too low BP and a too high BP is quite thin. Keeping the BP in the appropriate range helps minimise the risk of progression towards dialysis and the risk of cardiovascular complications. Also, it helps reduce side effects of medication and symptoms related to inappropriate BP. However, the way we currently measure BP, with a cuff installed on the upper arm (or brachial BP), can be highly inaccurate to determine the BP that is in the large vessels in the body (or aortic BP). It is important to have the best estimation of this last BP as it is the one that directly impacts the heart, the brain and the kidneys. These past years, central BP devices have been developed and we can now have a better estimation of the aortic BP. We think that better estimating aortic BP with central BP devices instead of using brachial BP values will allow us to improve the life of people with severe CKD.

This study will assign at random 116 patients with severe CKD to a central BP target or to a brachial BP target. These two BP will be measured at the same time by one machine. The patients, doctors and investigators will not know what target was allocated (blinded trial). During the study, the patients will be taken care of as usual by their kidney doctors who will not know if the BP that is provided is a central or a brachial BP. This study aims to determine the feasibility of doing a larger trial aimed at testing which strategy is best for outcomes that are important to patients, but also to determine which strategy results in lower arterial stiffness after 12 months, as a marker of cardiovascular disease.

Using fruits and vegetables to reduce the amount of acid in the diets of people living with chronic kidney disease (RAVe-DKD) – Dr. Dylan MacKay

Lay abstract: Chronic Kidney Disease (CKD) can reduce a person's ability to manage the balance of acid and base in their bodies properly, leading to a condition called metabolic acidosis. It is estimated that approximately 350,000 Canadians with CKD may experience metabolic acidosis. Metabolic acidosis may cause faster progression of CKD and an increased need for dialysis, as well as loss of muscle mass and reduced bone health. Currently, metabolic acidosis is mostly treated by giving people sodium bicarbonate, commonly known as baking soda, in pills to help balance the extra acid the kidneys are not able to remove. But patients often do not like the baking soda treatment, and do not always continue it. Metabolic acidosis can also be treated by reducing the acid that comes from the food a person eats. This can be done with foods that contain base forming compounds which neutralize acids, including fruit and vegetables.

The Reducing Dietary Acid with Fruit and Vegetables in individuals with Diabetes and Chronic Kidney Disease (RAVe-DKD) trial which was developed with patient partners, and reviewed and endorsed by the Canadian Nephrology Trials Network, will compare whether a weekly fruit and vegetable delivery intervention to lower dietary acid load, increase serum bicarbonate, and preserve kidney function in patients with diabetic kidney disease and metabolic acidosis in 13 nephrology centers across Canada is more effective than giving people sodium bicarbonate. We are in the process of securing funding for RAVE-DKD and to support this we are conducting a 2-site feasibility trial in Winnipeg and Halifax. We are also undertaking a trial to explore the potential risk of hyperkalemia posed by the increased fruit and vegetable consumption. We think that this research program holds the potential to change how metabolic acidosis in CKD is treated in Canada.