

**NP028**  
**EFFECTIVENESS OF OMEGA 3 POLYSATURATED FATTY ACIDS (FISH OIL) SUPPLEMENT IN LOWERING HYPERTRIGLYCERIDEMIA IN DYSLIPIDEMIC CHILDREN AND ADOLESCENTS**

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**BACKGROUND:** Limited pharmacological options are available for management pediatric hypertriglyceridemia. We sought to determine the effectiveness of dietary fish oil supplementation as a means to reduce triglyceride levels in pediatric patients.

**METHODS:** We reviewed 111 children ages 8-18 years with hypertriglyceridemia ( $\geq 1.5$ mmol/L) followed in a specialized dyslipidemia clinic. During follow up 60 subjects received fish oil supplementation (500-1000 mg/day) at some point, while the remaining patients did not. Linear regression models adjusted for repeated measures and potential confounding were used to model changes in lipid profiles and their interaction with medication and/or fish oil supplementation.

**RESULTS:** A total of 651 clinical assessments were available. On average children treated with fish oil had higher triglyceride levels (EST:+0.35[+0.09;+0.61]mmol/L,  $p=0.009$ ), lower HDL-cholesterol (EST:-0.06[-0.11;-0.01]mmol/L,  $p=0.02$ ) and higher triglyceride-to-HDL ratio (EST:+0.80 [+0.18;+1.41],  $p=0.01$ ) than those not treated with fish oil (no differences in total, non-HDL or LDL-cholesterol levels). No differences in concomitant pharmacological treatment between the 2 groups. All associations were adjusted for baseline lipid profile, changes in BMI z-score, and compliance with nutrition, physical activity and screen time recommendations. Treatment with fish oil was associated with a clinically relevant but non-statistically significant decrease in triglycerides (EST: -0.30 mmol/L,  $p=0.18$ ) and triglyceride-to-HDL ratio (EST: -0.54,  $p=0.15$ ). Fish oil had no effect on HDL-cholesterol (EST: -0.02 mmol/L,  $p=0.57$ ), non-HDL cholesterol (EST: -0.25 mmol/L,  $p=0.30$ ) or total cholesterol (EST: -0.23 mmol/L,  $p=0.31$ ). Fish oil was found to be well tolerated and accepted by families with non-compliance being reported in only 5/60 (8%).

**CONCLUSION:** Fish oil supplementation was found to be a potentially effective and well accepted option for the management of pediatric hypertriglyceridemia, although adequately powered randomized clinical trials are needed.

**NP029**  
**TOO SICK TO MOVE: CARDIOGENIC SHOCK AND THE ROLE FOR PERCUTANEOUS LVADS**

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The patient who presents in acute decompensated heart failure has always been challenging. Over 50,000 new patients a year are diagnosed with heart failure and there are 500,000 Canadians living with heart failure (Heart and Stroke, 2012). Despite our best efforts mortality rates are still greater than 60% (Hochman et al, 2006). Pharmacological agents come with their own detrimental effects to an already failing heart. The most widely used mechanical device for cardiogenic shock is still the intra-aortic balloon pump, but a recent multicenter RCT (SHOCK 2, Thiele et al, 2012) failed to show benefits of an intra-aortic balloon pump over medical therapy. Surgically implanted VADs offer a long term bridge to transplant (or destination therapy for those who are not transplant candidates), but the patient must be well enough to withstand a general anaesthetic, and VADs are not necessarily appropriate for reversible conditions.

With the introduction of percutaneous LVADs we had another tool to treat these very challenging patients. Our center has been using percutaneous LVADs since 2007, and we have seen not only the evolution of the devices but an evolution of our program. This presentation will showcase our Impella program from inception to current inter-professional practice.

Our institution has implanted 36 devices, 26 were used in high risk PCIs and 10 were primarily inserted for cardiogenic shock.

**NP030**  
**FOOD INSECURITY AND HOMELESSNESS INCREASES THE RISK OF DEVELOPING CARDIOVASCULAR DISEASE**

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**BACKGROUND:** Food and housing are basic needs for human beings and are thus considered prerequisites of human health, along with water, education, and health care. 1,2 Food security and housing are important social determinants of health (SDH) and key indicators of a population's health and wellbeing. Food-insecure individuals usually suffer from chronic diseases, such as cardiovascular disease (CVD). 3,4 Consequently, in combination with other SDH, CVD is three times more common within the homeless population in comparison to the general population. CVD is thus a major cause of morbidity and mortality among the homeless. 5-7 Inadequate food and poor housing conditions intertwine to have a negative synergistic effect on cardiovascular health.

**PURPOSE:** The purpose of this paper is to give an overview of food insecurity and housing in Canada and highlight their impacts on CVD, with particular focus on their implications for nursing practice and policy development.

**CONCLUSION:** Food insecurity and homelessness have been shown to have a negative effect on the cardiovascular health. Given the prevalence of CVD and the associated health care costs and burdens, it is pertinent for the government and health care providers to develop strategies aimed at CVD prevention and management among vulnerable populations.

**CLINICAL IMPLICATIONS:** Nurses need to become aware of the specific needs of individuals experiencing homelessness and food insecurity. The resources these individuals require must be assessed, quantified and adequately provided. Nurses need to be conversant with the health challenges faced by the homeless and food insecure populations. Understanding factors that could contribute to high incidence of CVD in these individuals is important. 6,8 Once this is achieved, interventions could be tailored to address specific health challenges and risk factors contributing to the increase of CVD within these food-insecure and homeless populations.

### NP031

#### **CARDIAC MYXOMAS: IMPLICATIONS FOR NURSING PRACTICE**

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Cardiac myxomas are the most common type of primary cardiac tumors. Myxomas are generally localized in the atria and occur more commonly in women. Although atrial myxomas are usually benign, complications are not uncommon. Approximately 50% of patients with myxomas experience symptoms due to central or peripheral embolism or intracardiac obstruction (Percell et al. 2003). Surgical removal of the myxoma is the treatment of choice and is usually curative, although myxoma recurrences can occur. This presentation will discuss the clinical presentation and diagnosis of cardiac myxoma. A case study of a woman presenting with a cardiac myxoma will be reviewed to highlight care issues and implications for nursing practice.

### NP032

#### **PERFORMING MAGNETIC RESONANCE IMAGING IN PATIENTS WITH CONDITIONAL CARDIAC DEVICES: A COLLABORATIVE PROTOCOL TO MITIGATE RISK**

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The performance of magnetic resonance imaging (MRI) is contraindicated in the presence of conventional cardiac devices. However, given the increasing number of indications for MRI and the growing number of device implants, MRI-conditional devices have been developed. The safe performance of MRI in patients with these select devices

requires careful verification of the compatibility of these technologies. Our objective was to develop a rigorous screening protocol to ensure the correct compatibility has been verified before MRI is performed. A review of the literature, clinical trial recommendations, and screening protocols at health centres currently performing MRIs in this patient population was conducted. Interprofessional discussions led to the development of an expert consensus screening protocol. Very few centers nationally are performing MRIs on patients with conditional cardiac devices. Screening protocols are not standardized, and there is limited experience using them long term to ensure safety verification. Protocol development and adherence requires collaboration with various healthcare team members, including the radiologist, electrophysiologist, treating physician, manufacturer, management, nursing, technologist, and patient. Lack of standardized screening protocols has traditionally led to MRI refusal in patients with these cardiac devices. Standardized screening protocols are required to ensure patients with conditional cardiac devices have safe access to MRI imaging. A prospective evaluation of the screening protocols used by interprofessional members of the healthcare team is necessary to determine patient safety and risk mitigation.

### NP033

#### **LA PERCEPTION DE LA QUALITÉ DE VIE EN PRÉVENTION SECONDAIRE DE LA MALADIE CORONARIENNE, PEUT-ELLE ÊTRE ASSOCIÉE AUX FACTEURS DE RISQUE CARDIOVASCULAIRES?**

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La prévention secondaire de la maladie coronarienne vise l'amélioration des facteurs de risque par l'adoption de saines habitudes de vie. Les perceptions influencent l'adoption des comportements, mais l'association entre la perception de qualité de vie et les facteurs de risque demeure méconnue. L'étude vise à décrire la perception de qualité de vie et à vérifier l'association entre cette variable et les facteurs de risque de la maladie coronarienne. Méthode. Étude descriptive-corrélative. Un échantillon de 83 participants atteints d'une maladie coronarienne a répondu à l'Index de qualité de vie (version cardiaque). Un examen clinique et des analyses biochimiques ont permis d'évaluer les facteurs de risque modifiables. La sédentarité a été vérifiée à l'aide d'un podomètre ayant une mémoire de 7 jours. Résultats (en cours). Les analyses descriptives (moyennes et écart-types) démontrent que les participants se perçoivent en bonne santé physique ( $25,3 \pm 4,1$ ), psychologique ( $25,6 \pm 3,3$ ), socio-économique ( $25,4 \pm 3,7$ ) et familiale ( $27,7 \pm 3,6$ ) et que leur perception globale de qualité de vie est bonne ( $25,5 \pm 3,3$ ). Les facteurs de risque rencontrent les cibles, sauf pour la circonférence de taille ( $98 \pm 13$  cm), l'indice de masse