Overview of Cardiovascular Disease & the Older Adult

Education for Health Care Professionals

Part 4: Recommendations

ST Elevation in Acute Coronary Syndromes

- For ST elevations in acute coronary syndromes, screening women, diabetics, and older individuals with atypical symptoms may be necessary.
- Special attention should be taken when using thrombolytic agents in the older adult, especially in those with renal failure.
- For individuals who have had a myocardial infarction, thrombolytic agents such as tPA (tissue plasminogen activator) should be taken along with a small prescribed amount of heparin to reduce the risk of hemorrhaging.
- Older adults receiving fibrinolytic therapy should be directly transferred to a percutaneous coronary intervention (PCI) centre with regular assessments of reperfusion along with prompt angiography and revascularization.

(Dai, Bushy-Whitehead, & Alexander, 2016; Fitchett & , 2002; HSFC, 2017d)

Non ST Elevation in Acute Coronary Syndromes

- For non ST elevations in acute coronary syndromes, screening older adults aged 75 and up may be required.
- Blood thinners like heparin and clopidogrel can be given to the older adult who may have an intermediate or high risk for myocardial ischemia.
- Administration of anti-thrombotic drugs should be tailored to the older adult to prevent adverse effects.
- Studies have shown that coronary artery bypass grafting (CABG) may be chosen for the first line of therapy (especially in those with DM or complex multi-vessel CAD) over the PCI due to fewer repeat revascularizations.

(Dai et al., 2016; Sorana, Manchandab, & Schuelerc, 2009; Fitchett & Rockwood, 2002)

Long-term Treatment following Acute Coronary Syndromes

- Acetylsalicylic acid (ASA) can be prescribed unless noted otherwise.
- Older individuals should be monitored closely for potential complications from ischemic events, procedures, and treatment, especially for the risk of bleeding, hypotension, bradycardia, and renal failure.
- Long-term treatment following an acute coronary syndrome for older adults may require a detailed care plan which includes instructions for medications and potential adverse effects, follow-ups, dietary and physical activity instructions and cardiac rehabilitation.

(Dai et al., 2016; Fitchett &Rockwood, 2002)

Atrial Fibrillation

- Atrial fibrillation is the most common arrhythmia among older adults.
- Treatment for atrial fibrillation requires oral anticoagulant therapy which helps prevent thromboembolism.
- With treatment and monitoring, the INR target for the older adult should be between 2.0 and 3.0. If the INR target is higher than 3.0, this increases the risk for bleeding.
- If older adults are given warfarin (a vitamin K antagonist), the INR must be monitored closely every 15 to 21 days in case of overdose and/or hemorrhaging.
- Common procedures may include left atrial catheter ablations in symptomatic older adults before performing atrioventricular node ablation and pacemaker implantation.

(Karamichalakis et al., 2015; Fraken, Rosa, & Santos, 2012; Gillis, 2002)

Heart Failure

- In a case of heart failure, assessments of the heart size and function should include an ECG, chest X-ray, detailed echocardiogram, complete blood count, electrolytes, renal and liver function tests.
- Having a steady fluid balance, systolic blood pressure not less than 100 mmHg and a heart range of 60 to 85 beats per minute are all important to maintain a stable heart.
- Current pharmacological therapies may include the use of diuretics, ACE inhibitors, beta-blockers, digoxin and spironolactone.
- However, ARBs may be recommended for treatment in older individuals rather than ACE inhibitors due to cough and other side effects.

(Forman et al., 2016; Díez-Villaneuva & Alfonso, 2016; Azad &Lemay, 2014; Arnold & Miller, 2002)

Valvular Heart Disease

- An echocardiography should be used to assess any abnormalities of the valves in the heart.
- The majority representations of valvular disease in the older adult are from aortic stenosis and mitral regurgitation.
- Possible treatment for aortic stenosis may require an aortic valve replacement, which is either done by an open heart surgery or a transcathether aortic valvular replacement.
- After surgery, careful management of the older adult is required to monitor for any risks of bleeding, renal failure, arrhythmias, heart blockages, cognitive decline, and malnutrition.
- In older adults, care plans are primarily focused on the quality of life due to possible ineffective medical treatment.

(Green, Rosner, & Schwartz, 2013; Bhatia, Basra, Skolnick, & Wenger, 2016; Chow & Cartier, 2002)

Drug Therapy

- Herbal preparations and St. John's Wort should be avoided and used with caution when using warfarin, digoxin or cholesterol-lowering agents due to the narrow therapeutic indexes.
- Health Care Professionals should be aware of the drug interactions when prescribing and administering with cardiovascular medications (even with over-the-counter drugs).
- If an adverse event occurs, it is recommended to reduce the drug dose than to discontinue therapy.

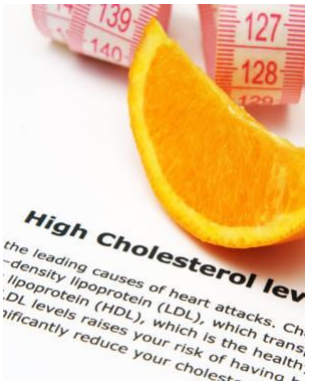
(Tachijan, Maria, & Jahangir, 2010; Grymonpre, Ogilvie & Rochon, 2002)

Hypertension

- First line of treatment for hypertension should be with low-dose thiazide-like diuretic or with a long-acting calcium channel blocker.
- Although beta-blockers help lowering blood pressure, they would not be classified as the primary treatment for high blood pressure due to lack of protection to the heart valves in the older adult.

(Miller et al., 2016; Niznick & Grover, 2002)

Hyperlipidemia



- Last but not least, intensive cholesterol-lowering therapy should be implemented in the treatment for older adults (aged up to 85) to decrease the effects of a CVD and/or Type II DM.
- Statins are commonly suggested for treatment of hyperlipidemia in older adults, even for prevention.

(Dixon, Donohoe, Ogbonna, & Barden, 2015; Niznick & Grover, 2002)

Overview Summary

- ☑ The incidence and prevalence of CVDs increase with age and it is the leading cause of death and disability in adults over the age of 75.
- ☑ If CVDs aren't managed properly by nutrition, malnutrition in the older adult can intensify the symptoms of chronic diseases such as cancer, diabetes and osteoporosis.
- ☑ It is important for the older adult to have their blood pressure checked every year and cholesterol levels checked every 5 years.
- ☑ Specific treatment for acute coronary syndromes, atrial fibrillation, heart failure, valvular heart disease, drug therapy, hypertension and hyperlipidemia are all important in managing cardiovascular disease in the older adult.