Clinical Practice Guidelines Presentation: CAD

Student Name

Chamberlain College of Nursing

NR576-Differential Diagnosis in Adult- Gerontology Primary Care

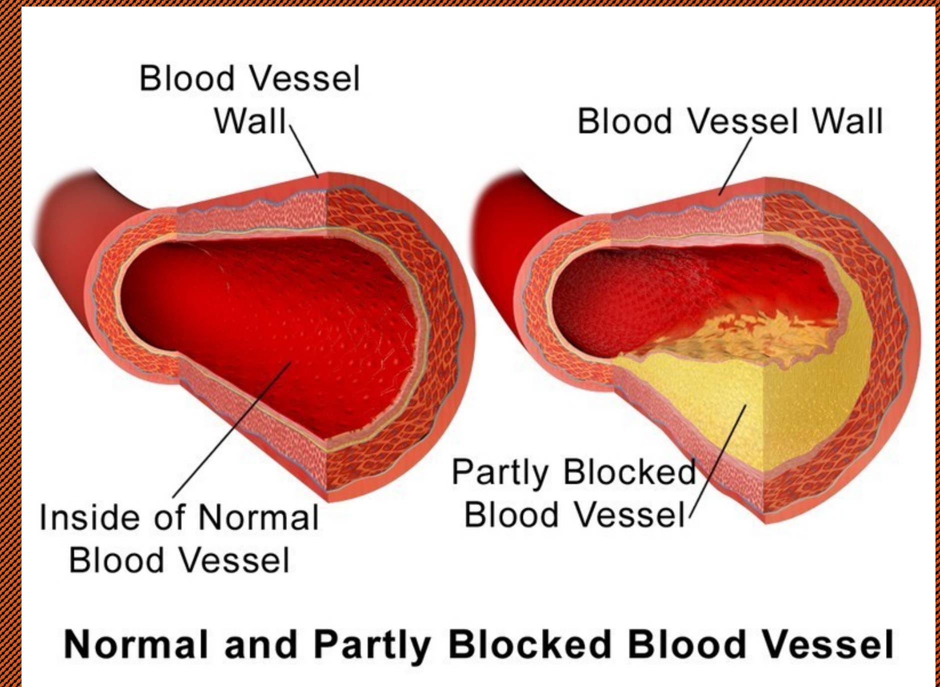
Dr. Brent MacWilliams Date Submitted

Disease Condition

- The selected CPG that will be discussed is primary prevention of cardiovascular disease, according to ACC/AHA guidelines
- The ACC/AHA Task Force on CPG was commissioned to aid in consolidating existing guidelines, as well as various research and newly confirmed improvement treatment/strategies by experts into a single practice guideline on the primary prevention of CAD
- Coronary artery disease (CAD) is a term that refers to the build up of plaque in vessels, known as a atherosclerosis

Disease Pathophysiology

- Narrowing of these vessels results in inability to provide adequate blood supply to the myocardial tissues
- Atherosclerosis is the development/build-up of lipid-rich plaques
- These plaques to not occur uniformly through the arterial tree and tend to occur at bends, branch points, and other areas of turbulent flow (Falk, 2013)



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Disease Epidemiology

- Although there has been substantial improvement in CAD outcomes in recent decades, it remains the leading cause of morbidity and mortality globally (Arnett, 2019)
  - Accounts to an estimated health care cost of >$200 billion dollars annually
- CAD is common, more so in older adults. Prevalence rises from 6.9% in men and 6.6% in women ages 40 to 59 years to 33.9% in men and 21.6% in women ages 80 years and older (Virani, 2021)
- In the US, the lifetime risk of developing CAD at age 40 years is one in two for men and one in three for women

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Typical Clinical Presentation

- Presentation in a clinical setting can vary depending on the severity of disease
- As atherosclerosis progresses a patient may develop acute symptoms:
  - For many people, the first clue that they have CAD is a myocardial infarction (MI)
    - Symptoms include: Angina, weakness, light-headedness, nausea, diaphoresis, pain or discomfort in the arm or shoulder, shortness of breath

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Applicability in Primary Care

- This CPG was developed by the ACC/AHA Task Force
  - Consists of members who are leaders in the field of cardiovascular medicine
  - Members are composed of a wide array of different backgrounds, representing different geographic regions, sexes, races, ethnicities, intellectual perspectives/biases, and scopes of clinical practice
  - The task force implements rigorous policies and methods to ensure that the documents are composed/developed without bias or improper influence
  - The original guidelines were published in 1980 relating to primary prevention of CAD. Over the years, many modifications to the guidelines have been made. Notable CPG guideline modifications

Applicability in Primary Care Contd.

- The CPG emphasizes the importance of 3 recommendations for CAD prevention efforts:
  - Team-based care approach is recommended for the control of risk factors associated with CAD (Wan, 2018)
    - Telehealth monitoring, patient education (brochures, articles)
  - Shared decision-making should guide discussions about the best strategies to reduce CAD risk
    - Transparency between provider and patient
  - Social determinants of health should inform optimal implementation of treatment recommendations for the prevention of CAD (Havranek, 2015).
    - Tailor care to socioeconomic and educational status, as well as cultural, work, and home environments

Key Action Statements & Body of Evidence

- In the primary care setting the provider should consider and address social determinants of health to better prevent CAD
  - Key actions:
    - Adults should be routinely assessed for psychosocial stressors and provided with appropriate counseling (DeFilippis, 2017)
    - Potential barriers to adhering to a heart-healthy diet should be assessed, including food access and economic factors
    - In addition to the prescription of type 2 DM interventions, environmental and psychosocial factors, including depression, stress, self-efficacy, and social support, should be assessed (Gonzalez, 2016)
    - For adults 40 to 75 years of age, clinicians should routinely assess traditional cardiovascular risk factors and calculate 10-year risk of CAD by using the pooled cohort equation (PCE) (AC, 2018)
    - Social support for adults who use tobacco, assistance and arrangement for individualized and group social support counseling are recommended (Verbiest, 2017)

Application in Clinical

- Application of the CPG in practice:
  - 69 y/o male was seen in the office to establish care. His past medical history includes HTN, HLD, major depression, tobacco dependence syndrome, history of alcoholism, and newly diagnoses COPD
    - His main complaint in the office was SOB and feeling more depressed than usual
    - Using Lexapro, self-medicating with medical marijuana
    - Vitals: BMI 27.8. BP: 130/70. Pulse: 71 regular
    - Quite drinking: 8 years ago, sober since this time. 29 year history of tobacco use: 30+ pack years. Family history significant for ETHO abuse in father as well as heart disease
    - Labs: LDL: 94. HDL: 38. Total cholesterol: 161
    - PE: Lungs CTA, symmetrical expansion with normal effort

Application in Clinical Contd.

- Patient possesses several risk factors of CAD
  - Smoking history
  - Hypertension
  - Hyperlipidemia
  - BMI >24.9
  - Depression (PHQ9=12)
  - According to the CPG several issues were addressed during the visit:
    - Diet and exercise were discussed and encouraged
    - Advised to resume current hypertension and hyperlipidemia medications
    - Depression symptoms addressed. Patient encouraged to engage in activities that better mood. Abilify added as an adjunct therapy to Lexapro.
    - LDCT ordered given history of tobacco use
    - ASCVD risk estimator demonstrated a 10-year risk of 20.3%

Application in Clinical Contd.

- Diagnosis and treatment compared to the CPG
  - Overall the treatment of the patient adhered to the recommended guidelines
  - All risk factors were identified and acknowledged
    - Calculation of a PCE was made to quantify and establish risk, which was shared and discussed with the patient
    - Emotional complaints were also identified and treated
- Areas for improvement:
  - Patient resistant to marijuana cessation. Additional recommendations could have been made such as quitting resources/programs
  - Patient encouraged to diet but specific meal plans could have been provided, consisting of a low calorie, low saturated fat and cholesterol

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