Flu Vaccination - SUMMARY

STATEMENTS

• Annual vaccination prevents CV morbidity and all-cause mortality in patients with CVD
• Vaccination with inactivated vaccine as secondary prevention is a Class I, level of evidence B recommendation from the ACC/AHA
• Vaccination levels in patients with CVD are below national goals
• Evidence of disparate administration of flu vaccination as a function of age, gender, race/ethnicity exists
• Only 50% of cardiology practices stock vaccine
• Influenza vaccination should be advised with the same enthusiasm as control of lipids, BP and other modifiable risk factors
INFLUENZA

- Causes > 36,000 deaths annually
- 225,000 excess hospitalizations
- Persons with CVD are at especially high risk
- Two types: Influenza A & B
- Subtypes of each are based on antigen characteristics and reflect geographical diversity
- Immunization against one type does not confer immunity against the other; thus antigenic shifts can be quite problematic

Vaccination recommendations

- US Advisory Committee on Immunization Practices [ACIP]
  - ≥ 50 yrs old
  - Children 6 mos to 59 months old
  - Women who will be pregnant during flu season
  - Adults and children with chronic diseases including CVD & diabetes
Vaccines

• Inactivated & live, attenuated
  – Given IM (inactivated) or intranasally
  – Targets 3 representative antigens for the current flu strain
  – Individuals with CVD should NOT receive live, attenuated due to risk of developing active disease

FLUVACS

• Flu Vaccination in Acute Coronary Syndromes
  – 301 patients with CAD randomly assigned to flu vaccine vs. none
  – At 1 year the relative risk of cardiovascular mortality was 0.25 with vaccination
  – RR: 0.59 for composite endpoint of CV death, nonfatal MI or severe ischemia
Flu vaccination and CVD

• In HF, flu vaccination associated with a decrease in hospitalizations
• For those at risk for stroke, flu vaccine associate with a decreased stroke risk
• [both of these are from observational case-control cohorts]

Flu vaccination and CVD risk

• UK study
  – 39,000 patients with CVD and flu vaccination
    • 90 day follow-up: no increased risk of MI or CVA
    • At 28 days, rates of MI and stroke were lower
Vaccination rates in patients with CVD

- The AHA and ACC recommend that vaccination should occur in 12 million persons with CVD in the US
- National goals as set by Healthy People 2010: > 60% for persons = 65 and > 90% for persons = 65
- Current thresholds [2005]: 1 in 3 adults or 34%

Barriers to vaccination

- Availability
  - Pulmonary offices: >90% have vaccine
  - Endocrinology offices: >70%
  - Cardiology offices: ~ 50%
- Race/ethnicity
  - Similar vaccination rates for whites and blacks
  - Lower vaccination rates for Hispanics (~30%)
- Age [for persons with CVD]
  - = 65, 71%
  - 50-64, 41%
  - 18-49, 23%
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Selected References:

- Circulation 2006; 114: 1549-1553
- European Heart Journal 2004; 25:25-31
- Circulation 2000; 102:3039-3045
- Stroke 2002; 33: 513-518