

# 19. Coronary Artery Disease in Women

## I. General Information:

- A. CAD leading cause of death women and men
- B. Incidence of CHD much lower in women than in men of the same age, up to age of 65, with the risk of dying from CHD being 3.5-fold higher in men than in women. After age 65, however similar. The lag is 15 years.
- C. Vascular disease kills 50% of women
- D. Misconception that breast cancer is the leading killer. Actually, 1 in 2 women will die of cardiovascular disease, and 1 in 25 women will die of breast cancer.
- E. >25% of women  $\geq$  65 years have CAD
- F. Diabetes increases the risk threefold in women, and puts them at the increased risk of CHD as men of the same age.
- G. Mitral valve prolapse, or valvular disease, were over-diagnosed in women in the past

## II. Top 10 Causes of Death for Women in the United States:

1. Heart Disease	374,849
2. Cancer	256,844
3. Strokes	96,428
4. Lung Disease	48,961
5. Pneumonia/flu	45,136
6. Diabetes	33,130
7. Accidents	31,919
8. Alzheimer's Disease	13,607

Source: CDC

## III. Treatment for women is similar

- Historically received less than men
- Less referral for cardiac rehab in part due to age and patient's motivation
- Exercise: Women more sedentary, more personal barriers to physical activity, cited care giving duties as their top barrier and less social support

## IV. Impact of Gender on Heart Disease:

- Treatment should not be affected by gender
- Diabetes has a stronger influence in women
- In women, typical angina less predictive of coronary artery disease
- Primary Prevention: Aspirin 81 mg qd Age Men 55 years, Women 60 years?
- Women's BMI goal is 25 at any age

## V. Gender Differences:

- A. Women on average; Older, more co-morbidities: hypertension, diabetes, CHF
- B. Manifest angina rather than AMI; and, among angina and MI patients, to have atypical symptoms.
- C. Widely believed women fare worse with PTCA and CABG because of technical factors recent studies cast doubt on this.

## VI. Noninvasive Evaluation

1. GXT: less predictive in women, because of the lower pretest probability of CAD
2. Sestamibi has less breast artifact than Thallium
3. Stress Echo also used

## VII. Referral Bias

Actually similar when adjusted for age

## VIII. Treatment/Outcome

1. Women thrombolytic therapy risk is increased most due to age increased risk of intracerebral hemorrhage.
2. PTCA and Stents complication rates higher in first month, then = for women and men by one year
3. Risk adjusted women have similar hospital mortality to men with CABG, and have decreased graft patency
4. Women undergoing PTCA are older and have more hypertension, diabetes mellitus, hyperlipidemia, and co-morbid disease
5. Estrogen replacement increase mortality, MI, DVT, dementia and cholecystitis in first 4 years with known heart disease-HERS JAMA-98
6. FEMALES: (Just age bias?)
  - 33% of angioplasties, stents and bypass surgeries
  - 28% of implantable defibrillators and
  - 36% of open-heart surgeries

## IX. Direction for Female ASHD

- Physical activity decreases with aging particularly in women.
- Obesity is a problem
- Smoking is now HIGHER in teen females
- Cessation of estrogen replacement