

Have we cracked the 'gender barrier' in symptom recognition?

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Symptoms of CHD in women ...

...are more complex and multifactorial than those of men; a possible explanation for the poor outcomes of women with CVD is the women's difficulty in recognition and then acting on cardiac symptoms. A similar point can be for the clinicians' inabilities to recognize the symptoms of CHD in women. Although much has been written about the similarities and differences in symptoms between women and men, many researchers and clinicians continue to label women's symptoms as "atypical" Rosenfield 2006

Literature review in Medline & Cinahl

22 articles: 2002-08; 8 reviews

- ACS
- (A)MI
- (Unstable) angina
- Cardiac
- Chest pain
- Gender differences
- (Gender similarities)
- Signs
- Symptom
- Attitudes
- Awareness
- Beliefs
- Expectations
- Misconceptions
- Perceptions
- Reactions
- Recognition

Background

- During the past 2 decades CHD has become a women's health issue
- Women & men have different clinical profiles, presentation & outcomes that may reflect the anatomical/patho-physiological & psychosocial differences & symptoms as well
- CHD in women is under-diagnosed, under-treated & under-researched
- Women (and the elderly) take longer to seek medical care when ACS symptoms start
- Rapid identification of cardiac warning signs & symptoms is vital for getting women into the healthcare system for treatment

Background, more specific

- Around one-quarter of women indentify CHD as a major health risk BHF 2003
- Around three-quarters interpret their symptoms as cardiac in origin: more men than women Thuresson et al 2007
- About 9 of 10 have more than one symptom Richards et al 2000
- Around 3-4 symptoms: one more in women than in men Milner et al 1999, Horne et al 2000
- One-third of those diagnosed with AMI have no chest-pain regardless of race: more common in women Canto et al 2000, Horne et al 2000
- One-quarter have silent or unrecognized AMI: no gender differences Canto et al 2007

Background, more specific

- Women experiencing a different symptom set than men, including more atypical symptoms King & McGuire 2008
- Women are more likely than men to have atypical symptoms Gupta et al 2002, Patel et al 2004
- Women (20-90%) report prodromal scores weeks to months prior ACS Graham et al 2008, Norris et al 2008
- Confusion in symptom identification & interpretation by women & healthcare professionals has led to delay seeking care King & McGuire, 2008

Cognitive & behavioral variables explaining gender differences in time to seek care

- **Expectations**
- “Can’t happen to me”

- **Ignorant**
- Believing to be too young
- Believing symptoms to be more severe ♀
- Not recognizing symptoms as cardiac ♀

- **Verbal history**
- Men using “factual” language while women are more likely to include “descriptive accounts of feeling”

Cognitive & behavioral variables explaining gender differences in time to seek care

- **Lay theory/Coronary candidacy**
- Men's disease ♀
- **Communicative (patronizing)**
- Not communicating symptoms to healthcare professionals: a crabby old women ♀
- **Supportive**
- Needing healthcare professionals or family "agreement" to take action ♀
- **Culture norms**
- Too shy to seek ♀
- Fear of influencing marital life ♀

Typical chest pain or discomfort

- Precordial chest discomfort, heaviness, fulness, radiating to the arm, shoulder
- Symptoms exacerbated by exertion or stress
- Symptoms that maybe relieved by rest or nitroglycerin
- Symptoms associated with shortness of breath (SOB), diaphoresis, weakness, nausea, lightheadedness

Symptoms in general

Patel et al 2004, King & McGuire 2007

- **Both gender**

- Chest pain (the main, most important, most prevalent, or only symptom; *in women as transient, stabbing, sharp; pressure, heaviness, tightness, squeezing: i.e. chest discomfort*)
- Shortness of breath (SOB)/dyspnea
- Fatigue
- Rest pain
- Sweating
- Weakness

- **Esp women**

- Arm pain
- Back pain (middle/upper)
- Cough
- Dizziness
- Fatigue
- Indigestion
- Jaw pain
- Loss of appetite
- Nausea
- Neck pain
- Palpitations
- SOB/dyspnea

- **Esp men**

- Diaphoresis
- Chest pain

Symptoms – no gender differences

Pengue et al 1998, Milner et al 1999, Martin et al 2004

- Arm pain
- Back pain
- Diaphoresis
- Dyspnea
- Dizziness
- Epigastric discomfort
- Jaw pain
- Nausea
- Neck pain

Differences in symptoms with regard to diagnosis

Goldberg et al 2000, DeVon & Johnson Zerwic 2002, 2004

- **Acute Coronary Syndrome**

- Back pain
- Dyspnea
- Jaw pain
- Nausea
- Palpitation
- Vomiting

- **Unstable angina**

- Chest discomfort
- Lightheadedness
- Numbness in hands
- Neck discomfort

- **Myocardial infarction**

- Arm pain
- Back pain
- Nausea
- Vomiting
- Indigestion
- Fainting

Differences regarding quantitative & qualitative studies

Miller 2002, Albarran et al 2007

- **Quantitative designs**
 - Chest pain
 - Dyspnea/SOB
 - Nausea
 - Back pain
 - Jaw pain
 - Neck pain
 - SOB
- **Qualitative designs**
 - SOB
 - Swelling
 - Fatigue
 - Sweating
 - *Chest pain*

Differences in symptoms with regard to ethnicity

Hravnak et al 2007

- **White women**

- Chest pain
- Dyspnea
- Arm & jaw pain
- Sweating

- **Hispanic women**

- Chest pain
- Fatigue
- Sweating

- **Black women**

- Chest pain
- SOB/Dyspnea
- Fatigue

Conclusions – if we have cracked the 'gender barrier' in symptom recognition?

- Cardiac symptoms are not uniform, but represent a spectrum of the clinical presentation
- Differences and similarities are identified for both women & men
- Both women & men have atypical presentations
- Women have classical, atypical or silent symptoms
- Less important which gender has a higher proportion of typical vs atypical symptoms - than recognizing them
(chest discomfort, discomfort in other areas of the upper body, SOB, other symptoms like cold sweat, nausea, lightheadiness -> severity, type, location, quality, duration, chief complain, total number etc)
- Accurate unbiased evaluation requires knowledge & skill
- Awareness among the individual, the public, the educators and clinicians in both primary & hospital care

Implications

- A gendered constructed understanding (extrapolation) – a single (masculinized) pathway
- A gender neutral understanding – a single (all for one) pathway
- A gender understanding – a two-way pathway
- **An individual understanding – a multi-pathway**

Review articles well worth to read

- Canto et al 2007
- DeVon & Johnson Zerwic 2002
- Kyker & Limacher 2002
- Miller 2002
- O'Keefe-McCarthy 2008
- Patel et al 2004
- Rosenfeld 2006
- Ryan et al 2007