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Journal Club
Emergency Medicine Block 5
November 1, 2016

Clinical Question:

Venus and Mars: Does it matter in the Emergency Department?

Clinical Scenario:

A 45 year old woman presents with lightheadedness and palpitations. Her symptoms are not exertional. On examination, she appears well and vital signs are normal. EKG and laboratory tests are within normal limits. Should you consider a cardiac etiology? Should she be admitted or outpatient follow-up? What age, gender, risk factors might make you more likely to consider this patient for observation?

These are the main articles:

1) Sex- and gender-specific research priorities in cardiovascular resuscitation: proceedings from the 2014 Academic Emergency Medicine Consensus Conference Cardiovascular Resuscitation Research Workgroup.

Wigginton JG1, Perman SM, Barr GC, McGregor AJ, Miller AC, Napoli AM, Safdar B, Weaver KR, Deutsch S, Kayea T, Becker L. Acad Emerg Med. 2014 Dec;21(12):1343-9. :
10.1111/acem.12541.

2) Anna Marie Chang, MD, Bryn Mumma, BA, Keara L. Sease, MAEd, Jennifer L. Robey, BSN, Frances S. Shofer, PhD, Judd E. Hollander, MD. "Gender Bias in Cardiovascular Testing Persists after Adjustment for Presenting Characteristics and Cardiac Risk". Academic Emergency Medicine. 2007; 14:599–606

3) J. Hector Pope, M.D., Tom P. Aufderheide, M.D., Robin Ruthazer, M.P.H., Robert H. Woolard, M.D., James A. Feldman, M.D., Joni R. Beshansky, R.N., M.P.H., John L. Griffith, Ph.D., and Harry P. Selker, M.D., M.S.P.H. "Missed Diagnoses of Acute Cardiac Ischemia in the Emergency Department". N Engl J Med 2000; 342:1163-1170 April 20, 2000

These are the supporting articles for background reading:

1) Wenger N.K.: "Clinical characteristics of coronary heart disease in women: emphasis on gender differences". Cardiovasc Res 2002; 53: pp. 558-567-- Discusses presentation and epidemiology but not a study

2) Joan L. Thomas, MD, Braus. "Coronary Artery Disease in Women, A historical perspective". Arch of internal medicine vol 158 feb 23 1998

3) [http://www.brighamandwomens.org/Departments and Services/womenshealth/ConnorsCenter/Policy/ConnorsReportFINAL.pdf](http://www.brighamandwomens.org/Departments_and_Services/womenshealth/ConnorsCenter/Policy/ConnorsReportFINAL.pdf)

4) Kerry A Milner, DNSc, RN; Marjorie Funk, PhD, RN (CCRN); Sally Richardsa (MSN, APRN); Rebekah Mull Wilmesb (MSN, APRN), Viola Vaccarino, MD, PhD, Harlan M Krumholz, MD. "Coronary Artery Disease: Gender differences in symptom presentation associated with coronary heart disease". The American Journal of Cardiology Volume 84, Issue 4, 15 August 1999, Pages 396–399

Discussion

The aim of this Journal Club was to open the minds of residents toward the idea that although we have often treated genders similarly based on research done mainly on white, male populations, that it may be beneficial for patients to get gender-based care at times.

This was somewhat of a different style of journal club given that there isn't a huge breadth of recent literature that supports or denies the importance of gender-influenced medical care. Additionally, given that there is a push toward gender equality in politics and wages, it is a controversial topic. However, given that we approach chief complaints such as abdominal pain differently in women than in men, it doesn't seem too unreasonable to think that other chief complaints may have gender-specific implications as well.

The Chang paper was an interesting dive into the differences in aggressive interventions for CAD between men and women. Interestingly, it showed that there was a statistical significant difference between the interventions that men received compared to that of what women received. Men did appear to receive more cardiac catheterizations. However, this did not seem to change outcomes with significance.

The Pope paper evaluated the difference between missed ACS and ACE between men and women presenting to the ED. It was found that the overall incidence of missed rates was low but those who were missed were more likely to be women and/or people of non-white race. Additionally, it suggested that those who presented to the ED with "atypical" symptoms such as SOB were more likely to be missed. This atypical complaint was more common in women.

Unfortunately, both of the above papers used scoring systems that either are outdated or do not specifically pertain to ED populations. Thus, although both found some interesting statically significant differences, both recognized the need for further, focused, RCT's to specifically address what we may be deficient in recognizing in the ED patient from one gender to the other.

Finally, the third article was a bit of a different flavor given that it was a consensus paper of a large group of emergency physicians. This brought to light many important questions regarding the care of both genders in the ED. It brought up interesting topics such as research into estrogen and progesterone as possible ACLS drugs in the future.

Overall, the conversation was engaged from some participants while others remained somewhat reluctant to acknowledge the possibility for gender-based discussions. It was acknowledged that this is a polarizing topic that has little recent RCT evidence to support it. Although there could be no specific recommendations made for changing people's practices regarding care for ACS and ACE, the group was encouraged to keep an open mind toward this topic and look for additional research in the future.