Cultural Competence Case Presentation
Chest Pain (Cultural, Race)

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Case Scenario/History

A 50 year old African American woman presents with chest pain. She states that the pain has been intermittent for two weeks. She has not seen a regular physician for some time because she lost her insurance when she changed jobs a year ago. She has occasionally gone to an ER or local clinics to get prescriptions for her anti-hypertensive medicine, hydrochlorothiazide. She visited your ER a week before and was sent home after having an EKG showing only non-specific changes and normal chest x-ray; no other tests were done.

She is angry because she feels her pain was not taken seriously. She states she does not trust the medical system since they sent her home and also years ago sent her father home with a heart attack and "let him die." She currently returns because the pain has persisted for the past hour and now states her pain is 7/10 pain. She asks for something for pain.

a. Review of Systems
Constitutional: complaining of pain

b. Past Medical History
Hypertension
Exercise stress test 2 years ago; she thinks it was normal, did not receive any further workup.

c. Medications
Hydrochlorothiazide

d. Family History
Father with MI at age 70.

e. Social History
Tobacco, 1 ppd for 20 years. No cocaine or recreational drug use.

e. Physical Exam
Temp: VS: T – 98.1 F, HR – 90, BP – 150/92, R – 22, O_2Sat 98% RA
General: Slightly obese black female who appears much younger than her stated age; she complains of pain and appears somewhat anxious and agitated, slightly diaphoretic
ENT: PERRL, OP clear
Neck: Supple, no lymphadenopathy
Cardiovascular: RRR, no rubs, murmurs or gallops. Chest wall mildly tender to palpation that reproduces her complaint of pain

Lungs: CTA bilaterally, no wheezing or crackles
Chest: Chest pain, can occur at exertion and at rest, currently with 7/10 substernal pain that has persisted for the past 60 minutes
Abdomen: Soft, non-tender, nondistended, BS present throughout
Extremities: No clubbing, cyanosis or edema
Skin: No rashes
Neuro: CN II-XII intact, DTRs 2+ throughout

Questions for discussion

1. What is in your differential diagnosis?
The differential diagnosis includes chest wall pain, pulmonary embolus, acute coronary syndrome, aortic dissection, pneumonia, esophageal spasm, myocarditis and pericarditis.

2. What cultural considerations must be taken into account in this case?
The patient has indicated a basic mistrust of the medical system because of her prior discharge and her father's experience with the medical system. There has been research that has shown lower levels of trust in African Americans in general(1,2) This should be considered in your interactions with the patient.

3. What personal biases might exist?
The patient has already expressed mistrust of the medical system. In addition, she has already discussed visiting the emergency department in the past and demonstrates a frustration with the medical system that may bias you about the nature of her visit. Bias might exist based on race or on other factors, both subconscious or conscious. According to Michelle Van Ryn, providers, reflecting attitudes that may exist among members of society as a whole, are likely to have a subconscious belief system which leads them to view an individual of a particular racial/ethnic group or class based on associated stereotypes. Although physicians are trained to be objective and fair in approaching patients of all races and backgrounds, this subconscious belief system is based on the provider's previous knowledge of or experience with a general population of individuals (such as "blacks"). The provider may assume that this general knowledge would apply to a specific individual within that population. This method of applying assumptions about a general population to a specific individual may in turn affect how the physician interprets his or her patient's complaints and further impact clinical decision-making including decisions to refer patients for particular treatments or procedures. This process can manifest itself, for example, as differing rates of referral by race or gender(3) and can lead to what Van Ryn calls a "self-fulfilling prophecy" in which subconscious behavior by the physician subsequently affects how that patient views the provider, and both patient and provider may develop less positive opinions of each other.(4)

4. How do you approach her request for pain medications?
It is important to carefully assess her request for pain medications and again to try not to introduce bias. There have been studies that suggest significant disparities in the administration of pain medication in the emergency department. Todd and colleagues studied the effect of ethnicity on the administration of pain medication in patients with

long-bone extremity fractures, finding that 55% of Hispanic patients, as compared to 26% of non-Hispanic white patients, failed to receive appropriate analgesics.(5) These disparities persist despite the fact that there has been no demonstrable difference in physician ability to assess pain severity in these groups.(6) Todd used the same design to compare analgesic administration in black and white patients. He found that black patients were also significantly less likely than white patients to receive emergency department analgesics.(7)

5. What would be your next appropriate step to take?
She has definitely indicated some risks for cardiac disease. It is important to do an initial workup including EKG and chest x-ray. Chest pain that is reproducible to palpation is not reliable in excluding cardiac disease so should not dissuade you from further workup. In addition, because this is her second visit for the same problem, it is important to consider other conditions that were not considered in her prior visit.

6. Are there any other diagnostic tests you would consider at this time?
A chest x-ray and EKG should be considered to rule out ischemic and pulmonary causes of her chest pain. Given her history and other factors, other labs that may be useful include cardiac enzymes, a d-dimer and spiral chest CT scan to exclude pulmonary embolus and aortic dissection, and ancillary labs such as coagulation studies, metabolic panel and complete blood count.

7. What are the challenges of assessing chest pain in black women?
In women, chest pain can be particularly challenging. Women tend to present with less typical stories of ischemia. They are also less likely to be referred for coronary procedures; black women are particularly less likely to receive referrals for appropriate cardiac workup. It is therefore important to remember these issues in your assessment to exclude any internalized biases.(8) A simple stress test is less useful in women, who often may have non-specific EKG changes. Nuclear medicine is thought to significantly improve the utility of the stress test in women.(9)

8. Could anything have been done differently to facilitate this encounter?
Having an awareness of potential biases initially may have facilitated a better workup on initial presentation one week prior. This patient has had experiences with the health care system that has lead to a level of mistrust, therefore it will be important to improve patient-doctor communication to insure that she will have better interactions with providers in the future.

For all races, participatory decision-making has become increasingly important in the patient-doctor relationship. Minorities have been found to be less likely than whites to receive adequate information during the doctor's visit and less likely to participate in medical decisions with their providers.(10,11)

Physicians who spend time communicating with patients about their illnesses and treatment options tend to have more positive responses to care.(12) For example, evidence has shown that patients who engage in active discussions about their care plan

with their providers have higher levels of satisfaction, fewer self-referrals, and overall better compliance with treatment regimens than those patients who do not engage in such discussions.(12,13,14,15)

9. *What sections of the case incorporate the 6 ACGME areas of core competence?*
    a. **Patient care**: Understanding the workup of chest pain, factors involved in patient-doctor communication.
    b. **Medical knowledge**: Understanding the workup of chest pain and how it presents differently in women.
    c. **Interpersonal & communication skills**: Understanding trust and communication issues that arose in this case and what factors are needed to improve patient-doctor communication.
    d. **Professionalism**: Understanding the importance of responding to the patient's request for pain medications in a mature, unbiased manner.

Case Outcome

An EKG is done that reveals ST segment elevations in leads I, AVL, as well as in V5,V6. She has reciprocal changes in II, III, AVL. The patient has elevated cardiac enzymes with a CK of 725 IU/L, CK-MB 73.3 ng/ml, Troponin-I of 1.9 μg/L indicating that she is having an acute myocardial infarction. She undergoes coronary angioplasty in the cardiac catheterization lab of a left circumflex artery and has a good outcome.

This case highlights a number of important issues that impact racial and ethnic disparities in health and health care for African Americans. The Institute of Medicine report *Unequal Treatment* highlights many of the component factors that can impact racial disparities in health care utilization. These factors can occur at the level of the patient, the health care system, or the patient-doctor interaction.(16)

This patient has indicated that she has not seen a doctor in quite some time. African Americans and Hispanics have lower rates of access to a regular provider and to specialist care.(17) In a survey of self-reported access to care, blacks made 33% fewer visits to physicians than whites for all levels of health.(18) When blacks do access the health care system, they tend to receive care at facilities that do not emphasize continuity of care, such as hospital emergency rooms, or in other cases, those that don't emphasize quality of care. Many of the differences in access are related to cost barriers. One in 11 blacks reports economic hurdles to care versus 1 in 20 whites. Blacks are also less likely to have any insurance coverage, which may contribute to a lower likelihood of reporting a usual source of care in this population.(19)

Although lack of insurance plays a role in disparities in utilization rates, it is not the only predisposing factor. Disparities have been demonstrated even among the insured across the board in patients with other types of coverage. Numerous recent studies examining cardiac procedures among blacks and whites have shown disturbing patterns of disparities. White-black differences in angiography, coronary artery bypass surgery and angioplasty have been shown to persist regardless of insurance coverage, suggesting that there are other factors which contribute to disparities in access beyond economic

factors.(20,21) A study of cardiac disease patients in Massachusetts found that, among patients with private insurance who were candidates for an acute intervention, whites were 1.11 times more likely than blacks to undergo angiography, 2.78 times more likely to undergo angioplasty, and 1.81 times more likely to undergo bypass surgery.(20) Similar findings were found in the VA Healthcare System with whites being 1.64 times more likely to receive angiography and 3.17 times more likely to receive coronary artery bypass surgery than blacks with cardiac disease.(22) Another analysis showed that blacks at a veteran's hospital (but not those at a university hospital) were less likely than whites to be recommended for cardiac revascularization.(23)

Given that health disparities exist among blacks and whites of comparable insurance status, factors beyond a basic ability to pay must be examined to explain the racial differences in utilization rates. The determining factors can vary from patient preferences for care to physician characteristics to the nature of the interface between patients and the medical care system. Cultural factors may also play a role in patient preferences. Ingrained in these cultural factors are issues of trust and discrimination. Corbie-Smith and colleagues have shown that trust issues play a prevalent role in blacks' choices to participate in clinical trials.(1,2) In focus groups evaluating use of cardiac procedures among VA patients, researchers found that blacks commonly emphasized the importance of establishing trust with their providers prior to agreeing to a procedure.(24)

Disparities may also arise at the provider level. Providers have been shown to be less likely to refer minority patients for procedures and other acute interventions. The best documented examples of differential referral rates and treatment patterns have been in the area of cardiology. Non-whites with acute cardiac ischemia were two times more likely than whites to be sent home from the emergency department and those with acute myocardial infarction were more than four times more likely to be incorrectly diagnosed.(25) A review by Sheifer and colleagues examining past studies of intervention for cardiac disease showed consistently lower procedure rates for blacks as compared to whites.(26) Schulman and colleagues conducted a study, which has been frequently cited in the literature, documenting a link between discrimination and rates of cardiac procedure referral. In this study, physicians were presented with male and female actors of various races, all of whom reported identical chest pain case scenarios. The study found that physicians were less likely to refer blacks and women (as compared to white men) for cardiac catheterization. In this study, black women were the least likely to be referred overall.(8)

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