

THE IMPACT OF GENDER BIAS IN MEDICINE

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CASE STUDY

- Healthy 19 year old NCAA Track and Field Athlete with “shin splints” but also with:
 - Multiple achy bone/joint complaints and issues
 - Random Bruising
 - Tiredness/Trouble staying awake in class on an increasingly regular basis
 - Seems to get sick often with colds/viruses
 - Occasionally Abnormal period
 - Mild weight loss between Freshman-Sophomore year
 - Progressing over the 4 years
 - Increasing fatigue and more bruising
 - Starts avoiding certain food groups because “Allergic”
 - More mild weight loss despite saying diet is good
 - Worsening frequency and severity stomach and GI cramps
 - Multiple sports injuries
 - GERD
- What’s the Diagnosis? Female athlete triad/disordered eating
- She is seen by the athletic training staff and multiple physicians during this period, what does she have:
 - Attention seeking
 - Hypochondriac
 - Menstrual cycle related
 - Malingerer/Doesn’t want to go to practice
 - Doesn’t sleep enough/parties too much
 - Clumsy/accident prone or gets drunk and runs into things
 - Bad Diet
 - Didn’t realize college/life was going to be hard
 - Anxiety

CASE STUDY CONTINUED

- NCAA Athletics finished and now 4 Years following onset of symptoms things continue to gradually worsen:
 - Increased GI complaints
 - Occasional Blood in stool
 - Sudden Lactose Intolerance
 - Raynaud's Develops
 - Increased bruising
 - Worsening fatigue
 - Weight loss
 - Orthostatic Hypotension
 - Global achiness multiple complaints
- What's wrong with the patient?
 - Finally sees a GI specialist
 - Disordered eating/Poor Diet
 - IBS-Figure out your trigger
 - Eat more fiber and whole grains
 - Lactiad Chews
- Team Doctor at Internship is concerned
 - Whole lot of blood work
 - Negative SLE, RA, Leukemia, HLAB27
 - Iron Deficiency Anemia
 - Start supplementing and do get some mild improvement

CASE CONTINUED

- 2 years later-still having issues
 - 45 pound unexplained weight loss
 - Trendelenburg gait
 - Gaunt
 - Hair thinning
 - Lots of GI issues
 - Osteopenia
 - Hypotension
 - Stress Fractures
 - Irregular periods
 - Chronic fatigue
- 8+ years from the onset of symptoms having seen multiple doctors, trainers, health care professions what I am Finally diagnosed with?
 - Celiac's Disease

GENDER DIFFERENCES IN DELAYED DIAGNOSIS

- Case study is not an isolated incident-happens all the time and we have the data to support this
 - With Celiac Disease “mean delay to diagnosis from the first symptoms was 9.7 years, and from the first doctor visit it was 5.8 years”
- With Autoimmune diseases on average it takes five years and five doctors to receive a proper diagnosis
 - Half of these patients were labeled “chronic complainers” in the early stages of their illness
 - >75% of the patients are women
- Heart Disease and Heart attacks in women
 - Women under the age of 55 are twice as likely to die after being hospitalized for a heart attack as men in the same age group
 - Initial heart attack symptoms can be quite different in women and men
 - Multiple studies have shown that women were less likely to receive implantable cardiac defibrillators after an out-of-hospital cardiac arrest and when indicated for congestive heart failure

DISMISSAL OF SYMPTOM REPORTING AND UNDERREPORTING OF SYMPTOMS

- The big reason behind delayed diagnosis
- Studies show it is much more prevalent in women than men
 - Journal of Clinical Oncology: Ignorance of complaints was the major reason in diagnostic delay(52.2%)
 - 63% were women, subjective complaints were much more likely to be ignored
 - A recent study from the Yale School of Public Health suggests that younger women who have heart attacks may hesitate to seek care for fear of being considered hypochondriacs
 - Studies have shown that “Critically ill women 50 years and older were less likely than critically ill men to be admitted to an intensive care unit”
- Damaging Stereotypes and Assumptions:
 - Women are more sedentary
 - Women have a high pain tolerance/can handle pain better (because of Child Birth)
 - It's just that time of the month, “It's just her hormones”
 - More emotional and more anxious
 - When the cause of an ailment is unknown, doctors tend to default to psychological explanations
 - Hysteria

DVT EXAMPLES

- Female specific risk factors for DVT
 - Oral Contraceptives, Pregnancy, Venous Disease, Postmenopausal Hormone Therapy
- But data shows that women are less likely to receive Blood Clot Prophylaxis
 - 2008 Study at Johns Hopkins showed that women were more likely to die of a post op DVT
 - 69% of male trauma patients were properly treated for blood clot prevention compared with 55% of female patients

PAIN CONTROL

- Acute Pain
 - Women are less likely to receive narcotic medications for post-surgical pain
 - There was a study that looked at children and after surgery, boys were more likely to be given codeine, while girls received acetaminophen
- Chronic pain
 - More likely to be diagnosed as psychological
 - Men are more likely to be referred to Pain management and women more likely to be referred to psychology
 - Doctors prescribe diagnostic tests sooner and more often in Men
 - Females with Chronic knee pain are even less likely to be referred to orthopedics for a TKR
- When you add racial differences things get scary
 - “Black children were 39 percent less likely to receive pain medications compared to white children with similar medical situations.”
 - Minority women are more likely to be described as “Drug Seekers”

BIAS IN MEDICAL RESEARCH

- What are they majority of patients in research studies and journal articles?
- It wasn't until 1993 that the NIH mandated the inclusion of women and minorities in government funded biomedical research and clinical trials
- Even if women are in the studies, sex-and gender-based analyses are not routinely performed
- The number of female subjects is often inadequate
- Female lab animals and cells from female organisms are rarely used (~90% male)
- ~80% of Surgical literature is on male subjects

SIDE EFFECTS OF RESEARCH BIAS

- Gender Difference in Drug Dosing
 - Since before 1993 most drugs were tested exclusively in men, little was known if the side effects on women until they reach the market
 - “Government Accountability Office study found that 8 of 10 drugs removed from the market from 1997 through 2000 posed greater health risks to women”
 - Dosing requirements can change pre and post menopause
 - example: low estrogen levels may require higher doses of ARB to lower Blood Pressure
 - US women were routinely overdosing on Ambien for years
 - Women metabolize and eliminate the drug slower, FDA cut dosing in half for women (2013)
- Heart disease example
 - Historically most of the research on heart disease has focused on men (only 31% of CV clinical trials stratify for sex)
 - The early diagnostic tools to identify heart disease aren't always well suited for female patients

WHAT DOES THIS HAVE TO DO WITH PODIATRY?

- DVT, acute and chronic pain, prescribe medicines, orthopedic conditions
- Autoimmune issues can effect the feet
- Female Athlete Triad
- Not every female is concerned about the cosmetic appearance of their feet
- Osteopenia, Stress fractures, Vitamin D deficiency
 - Ask Why, Review of Symptoms
 - Think outside the box
 - If things aren't lining up: refer, test
 - My case study: Who do you think diagnosed me with Celiac Disease?
 - Chiropractor

GENDER BIAS IN MEDICINE IS A REAL PROBLEM

- Cant solve this problem with one PowerPoint
- Recognizing the Bias in order to treat the bias
- The medical system and society has to admit this is a problem and take steps to fix it
 - More research with women subjects
 - “Sex-and gender-based analyses should be routine in all health research”
- We need to empower women to share their concerns and symptoms
 - BUT.....we have to train doctors to become better listeners and question askers
 - We cant put the sole responsibility on female patients
 - Instead of asking “Do you have any questions?” as “What questions do you have for me?”

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