ECHO IDAHO

Behavioral Health in Primary Care

Medical Differentials in Psychiatric Illness

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None of the planners or presenters for this educational activity have relevant financial relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

Learning Objectives

- Learn about common medical contributors to psychiatric illness, specifically anxiety, depression and psychosis
- Identify characteristics of patients who are more likely to have medical conditions as a cause for their psychiatric symptoms
- Learn to run a brief differential (list of possible causes for symptoms) to improve rapid identification and treatment of patients who would benefit from more comprehensive medical assessment

Which types of medical conditions are most likely to cause psychiatric symptoms?

- Neurological
- Endocrine
- Infectious
- Autoimmune
- Metabolic
- Toxic (including medications)

"Well, Bob, it looks like a paper cut, but just to be sure let's do lots of tests."

Which patient characteristics should raise more suspicion for medical cause of disability?

- Any new onset psychiatric illness, especially in an older patient without a prior history
- Psychiatric conditions unusual for age (later onset of schizophrenia)
- Atypical features of psych illness
- Treatment resistance
- Multiple unexplained physical symptoms in addition to psychiatric symptom

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Which patient populations are high risk for overshadowing and missed diagnoses?

- Patients with intellectual disabilities (specific psychiatric and medical diagnoses often overlooked, proportional to degree of disability)
- Patients with prior history of psychiatric illness are less likely to have appropriate medical work-up during psych admission
- Patients with physical disabilities
  - JAMA 2021—in pregnant patients with disabilities, medical illness and general symptoms commonly were ascribed to underlying disability, may overshadow more work-up
- Patients with complex or challenging presentations medically or psychiatrically
- Geriatric patients

Case A: Depression

- 68-year-old male patient with a recent history of myocardial infarction, under the care of cardiology, presents back to primary care with worsening anhedonia, depressed mood and fatigue.
    - PHQ-9=15, GAD-7=9
  - Multiple new medications have been started since you last saw the patient
    - Beta-Blocker
    - Aspirin/Plavix
    - Statin
  - His exercise tolerance is significantly reduced
  - He worries about a recurrence and is not sleeping well
  - What is the medical differential for his symptoms?

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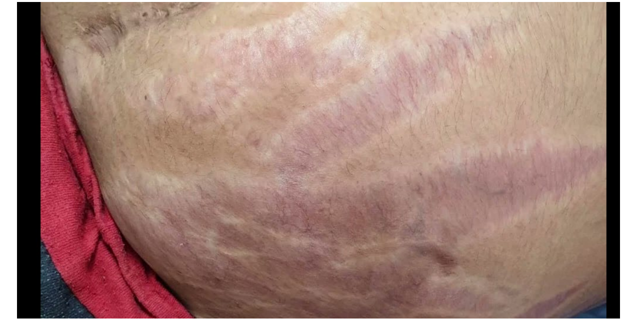
Medical Differential for Depression-1



- Endocrine
  - Hypothyroidism
    - Usually will be associated with other signs of hypothyroidism—weight gain, fatigue, cold intolerance, dry skin, hair loss, hoarseness, menstrual changes
    - Commonly cited and worked up, but association with depression more moderate than assumed
    - Systematic review and meta-analysis, JAMA 2021
      - 25 studies, 348014 participants
      - Moderate association of overt and less so of subclinical hypothyroidism with clinical depression. Females more likely to have an association
  - Cushing Syndrome—Cortisol excess
    - Key clinical findings: purple striae, easy bruising, proximal muscle weakness, facial plethora, central weight gain, osteoporosis
    - Depression occurs in 50-80%
    - Consider in treatment resistant depression—Cannot be diagnosed with single cortisol value and AM cortisol is not a recommended test
  - Perimenopause/menopause
  - Diabetes/blood sugar dysregulation

Medical Differential for Depression-2

- Anemia and nutritional deficiencies
  - Anemia
  - B12 deficiency
  - Folate deficiency
- Medication and substances
  - JAMA 2018
    - 37.2% of US adults use at least one medication with depression as adverse effect
    - 6.9% used 3 or more
    - Percentage of adults with concurrent depression was higher among those using more medications
  - Antihypertensives, hormonal agents, PPIs, analgesics, antibiotics, antivirals, neurologic agents, Accutane, varenicline, statins
  - Alcohol, sedatives, stimulants (during withdrawal)

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Medical Differential for Depression-3

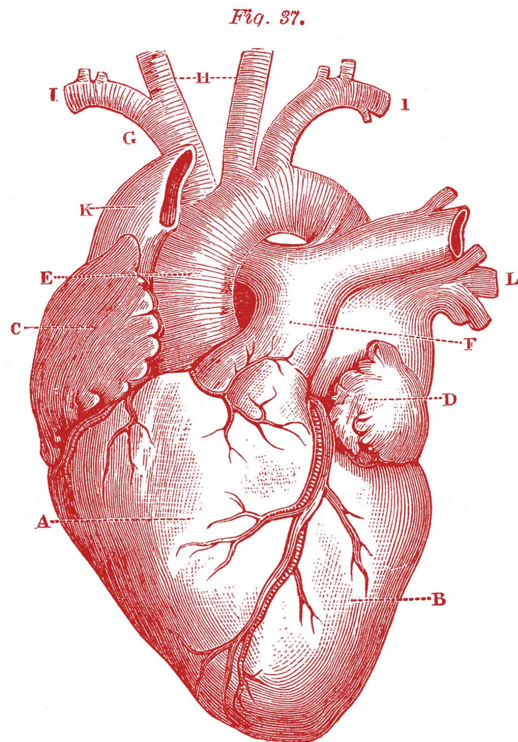
- Occult malignancy
  - Pancreatic cancer—direct mechanism. Likely would also present with weight loss and other constitutional symptoms (night sweats, etc)
- Autoimmune encephalitis –also associated with psychosis

- Back to Case A.
  - Multiple possible contributors
  - Medication effects
  - Work-up for anemia, nutritional concerns following hospitalization
  - Adjustment reaction to illness
  - May need depression treatment if med adjustment is not an option

Case B: Anxiety

- 47-year-old female presents with anxious mood, jittery feeling
  - Has noticed excessive sweating and heat intolerance attributed to perimenopause
  - Palpitations prominent, feels her heart racing
  - History of asthma and was recently ill with influenza so increased her Symbicort use and recently completed an extended course of prednisone

Medical Differential for Anxiety-1



- Endocrine
  - Hyperthyroidism
    - Anxiety, insomnia, palpitations, weight loss, diarrhea, sweating, heat intolerance
  - Hypoglycemia
    - Diabetic patients on insulin
  - Diabetes
    - Direct and illness burden effect
  - Pheochromocytoma—endocrine tumor
    - classic triad: headaches, palpitations, profuse sweating
- Cardiovascular conditions
  - Arrhythmias
    - Palpitations associated with anxiety, most have benign cause based on this common presentation, but many will also have rhythm disturbance
  - Mitral valve prolapse
  - Acute MI

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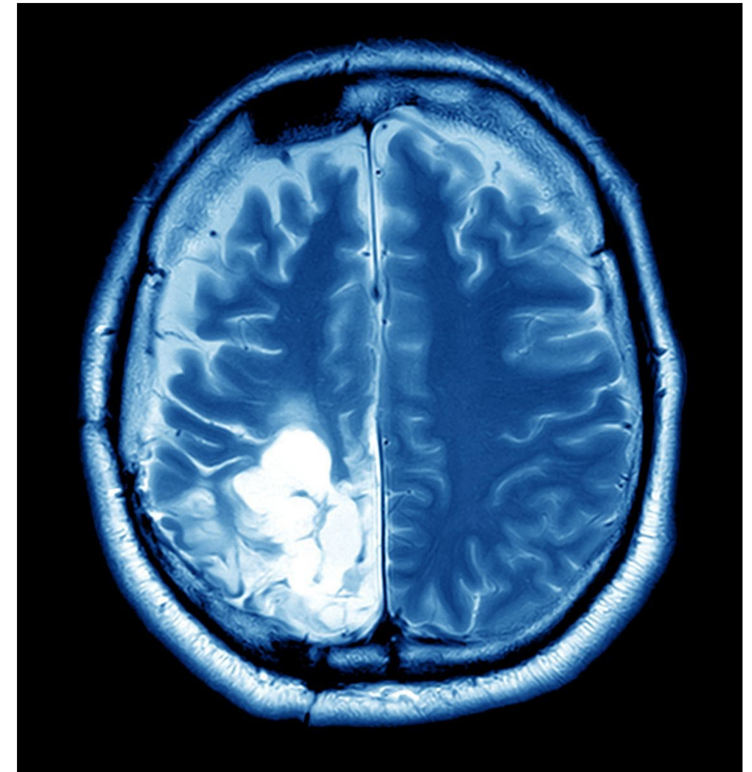
Medical Differential for Anxiety-2

- Pulmonary
  - Asthma and COPD
    - Respiratory issues associated with panic
  - Pulmonary embolism
- Neurologic
  - Multiple Sclerosis—anxiety rates 3 times higher than general population
  - Seizure disorders
  - Brain tumors—depression and anxiety in up to 10%, psych symptoms may be first presentation



Medical Differential for Anxiety-3

- Intoxication
  - Alcohol, caffeine, cannabis, hallucinogens
- Withdrawal
  - Alcohol, opioids, sedatives
- Medications
  - Bronchodilators (albuterol, etc.), nasal decongestants, antihistamines, steroids, thyroid medication, psychiatric medications
- Toxins
  - Heavy metals, organophosphate (pesticides), insecticides, nerve gases, CO, CO2

- Back to Case B
  - Hyperthyroidism vs perimenopause
  - Asthma vs medication to treat asthma
  - Palpitations due to other underlying cause vs palpitations FROM underlying cause vs palpitations FROM anxiety

Case C: Psychosis

- 23-year-old female working on a farm outside Burley presents with psychosis, auditory and visual hallucinations
  - 2 weeks prior to presentation suffered from first recorded seizure of her life. Imaging including MRI normal
  - No command auditory hallucinations or delusional self-experiencing
  - No prior psych history
  - Admission to psychiatry without response to medications and with progressive difficulty interacting with staff

Medical Differential for Psychosis-1

- Medical conditions account for substantial portion of first presentation of psychosis in the ER
  - One study cited that 54.7% of first presentations of psychosis were attributable to an underlying medical condition (The Journal of Emergency Medicine 2018)

Causes:

- Illicit drug use
  - Cannabis, stimulants, alcohol
    - 32% of individuals with substance induced psychosis are later diagnosed with schizophrenia (26%) or Bipolar (44%)
    - Cannabis most likely drug associated with later diagnosis

Medical Differential for Psychosis--2

- Medications
  - Anticholinergic, corticosteroids, antiparkinsonian medications, anesthetics and analgesics , anticonvulsants, antimicrobials, phenylephrine, pseudophedrine, antidepressants, etc
- Delirium
  - Waxing and waning, fluctuating
  - Acute onset
  - Worse in evening, night
  - Disorientation
  - Visual more common than auditory
  - Abnormal vitals

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Medical Differential for Psychosis-3

- Endocrine and metabolic
  - Thyroid, again!
  - Parathyroid disorders
  - Adrenal conditions
  - B12 deficiency
  - Hepatic or renal encephalopathy
- Neurologic
  - Epilepsy—ictal, postictal and interictal forms, 2-7.8% of epileptics
  - Cerebrovascular disease
  - Parkinson's
  - TBI
  - Migraine

Medical Differential for Psychosis-4

- Autoimmune encephalitis
  - Anti-NMDA Receptor encephalitis
    - Acute onset
    - Neuro signs
    - No prior psych history
    - NEED to diagnose with lumbar puncture and send for specific antibody testing
      - *** abnormal LP was found in 88.2% of patients with a medical cause for psychosis compared to 23.8% without a medical cause
- Infectious
  - Viral encephalitis, bacterial meningitis, Neurosyphilis, Lyme Neuroborreliosis
- Structural
  - Brain tumors, Intracranial hemorrhage, Stroke
- Toxins
  - Carbon monoxide poisoning, Heavy metal poisoning (lead, mercury), Organophsophate insecticides, Volatile substances (fuel, paint)

Key Points

- Medically conditions commonly cause or contribute to psychiatric illness
- Certain patient and presentation characteristics make a medical cause more likely
- Certain patient populations are at risk for being misdiagnosed
- The whole psychiatric and medical team should be on the lookout for indications for medical work-up and referral for more testing

References

- Available upon request