Seasonal Affective Disorder

See also Depression

Background

1. Definition:
    - Recurrent or seasonal pattern of major depressive episode in patients with bipolar I, II, or major depressive disorder
    - Considered a subtype of Major Depressive Disorder (MDD)
    - Occurs in 2 major seasons: fall-onset or spring-onset SAD
        - Fall-onset type most common type called "winter depression"
        - Less common type of SAD occurs in the summer
2. General information
    - About 10-40% of primary care patients have significant depressive symptoms
    - <50% of these meet DSM-IV criteria for depression
    - Depression displaying a seasonal mood pattern is called SAD

Pathophysiology

1. Pathology of disease
    - Not well understood
        - No studies have established a causal relationship
    - Abnormal melatonin metabolism and altered circadian rhythm proposed but studies inconsistent
        - Exposing the retina to bright light suppresses melatonin production by pineal gland
    - Hypothesis involving the neurotransmitter, serotonin, appears to have the most support
        - Studies show decreased central serotonergic activity in patients with SAD
        - Light therapy shown to be ineffective if tryptophan depletion
        - Beverages with tryptophan did not alter brain serotonin and were not correlated with recurrence of symptoms
    - Women with HTR2A genotype, which codes for a serotonin receptor, more susceptible to SAD or attention-deficit/hyperactivity disorder (ADHD)
2. Incidence, prevalence
    - Lifetime prevalence of SAD ranges from 0 to 9.7%
    - Higher prevalence of SAD in northern latitudes
        - Variations among different ethnic groups at similar latitudes
    - People migrating to higher latitudes more susceptible to SAD
3. Risk factors
    - Family history of severe depressive disorder (55%) or alcohol abuse (34%)
    - True gender ratio is distorted by selection bias
    - Higher incidence of winter SAD in women
4. Morbidity
    - None directly related to SAD

Diagnostics

1. Screening
    - PCPs fail to diagnose nearly half of all patients with depression and other mental health problems
    - SAD is a pattern specifier or subtype of major depression or bipolar disorder
        - Screening for depression should help identify patients
    - Seasonal Pattern Assessment Questionnaire (SPAQ) has a specificity of 94% and a sensitivity of 41%
    - 2-question screen has been shown to be helpful
        - "Over the past two months, have you been bothered by:"
            - Little interest or pleasure in doing things?
            - Feeling down, depressed and hopeless?
    - SIGECAPS mnemonic
        - Sleep disorder (incr or decr)
        - Interest deficit (anhedonia)
        - Guilt (worthlessness, hopelessness, regret)
        - Energy deficit
        - Concentration deficit
        - Appetite disorder (incr or decr)
        - Psychomotor retardation or agitation
        - Suicidality
2. History
    - Fall-onset SAD is characterized by atypical symptoms of depression
        - Increased
            - Sleep
            - Appetite with carbohydrate craving
            - Weight
        - Irritability
        - Interpersonal difficulties, especially rejection sensitivity
        - Leaden paralysis
            - Heavy, leaden feelings in arms and legs
    - Spring-onset SAD is characterized by typical vegetative symptoms of depression such as weight loss, decreased sleep, and poor appetite
    - Most occur as unipolar MDD
    - Some show Bipolar II patterns of the disorder, and very few show Bipolar I pattern
    - Winter SAD symptoms occur in October or November and subside in March or April
3. Physical exam
    - Nothing specific for SAD
    - Standard evaluation for depression
4. Diagnostic testing
    - Seasonal Pattern Assessment Questionnaire (SPAQ)
    - Seasonal Health Questionnaire
        - Higher spec/sens than SPAQ, however, results need to be confirmed with larger, more diverse groups
    - Hamilton depression scale (HAMD)
        - Often used for follow up

5. Diagnostic Criteria
    - DSM-IV-TR Criteria for Seasonal Pattern Specifier
        - Temporal relationship between the onset of major depressive episodes in bipolar I or bipolar II disorder or major depressive disorder, recurrent, and a particular time of year
            - Unrelated to effects of seasonal-related psychosocial stressors (eg., regularly being unemployed)
        - Full remissions occur at a characteristic time of the year
        - In the last 2 years, 2 MDEs have occurred that demonstrate the temporal seasonal relationships defined in Criteria A and B, and no nonseasonal episodes have occurred during that same period
        - Seasonal MDEs outnumber the non-seasonal episodes that may occur over the individual's lifetime

Differential Diagnosis

1. Key DDx
    - SAD may overlap with other diagnoses that share serotonergic and noradrenergic mechanisms
        - Other major depressive disorders
        - Generalized anxiety disorder
        - Panic disorder
        - Bulimia nervosa
        - Late luteal phase dysphoric disorder
        - Chronic fatigue syndrome
        - ADHD
2. Extensive DDx
    - Alcoholism may be self-medicating an underlying depression or manifesting a seasonal pattern to alcohol-induced depression

Therapeutics

1. Acute treatment
    - Treat suicide risk with hospitalization
2. Further management
    - Light therapy (SOR:A)
        - Agency for Healthcare Research and Quality (AHRQ) has guidelines for light therapy
    - Consider light therapy as 1st-line treatment when:
        - Pt is not suicidal
        - There are medical reasons to avoid antidepressants
        - History of a favorable response to light therapy
        - No history of a negative response to light therapy
        - Pt requests it (with the above four criteria met)
        - An experienced practitioner deems it indicated (with the first four criteria met)
    - Unless above criteria met
        - Light therapy is a 2nd-line option for patients who do not respond to medications

- Meta-analysis of randomized trials found a reduction in depressive symptom severity with bright light and dawn simulation therapies
  - However, prophylactic use of light therapy and long-term benefits of light therapy have not been established
- Therapy involves gradual increasing visible light of 10,000-lux at eye level for up to 30 minutes every morning
  - Start at 10 to 15 min sessions per day
  - Light therapy may be reduced to 15 min every morning after 2-4 weeks of effective therapy
- It may take 4-6 weeks for symptoms to improve
- Treatment should continue until other sources of daily light exposure are available
- Light therapy cannot be endorsed as an evidence-based treatment for antepartum and postpartum depressed women
- It is important that any light therapy treatment utilize equipment that eliminates ultraviolet frequencies and produces bright light of known spectrum and intensity
  - For these reasons, use of client-constructed light therapy units is contraindicated
- Partial list of light box retailers
  - US suppliers
    - Hughes Lighting Technologies
    - SunBox Company
    - Apollo Britelite
    - Enviro-Med Bio-Light
  - Canadian suppliers
    - Uplift Technologies, Inc
    - Health Light Inc
    - Northern Light Technologies
    - Sunnex Biotechnologies Inc
- Side effects
  - Photophobia
  - Headache
  - Fatigue
  - Irritability
  - Hypomania/mania
  - Insomnia
  - Retinal damage
- Pharmacotherapy (SOR:A)
  - Fluoxetine (Prozac, Sarafem) and light therapy were equally effective treatment options
  - Bupropion HCL extended release (Wellbutrin XL) is the first drug approved by FDA in June 2006 for prevention of major depressive episodes in patients with SAD
  - Treat prior to onset of symptoms and discontinue treatment following a 2-week taper at end of season

        - Indicated in patients with
            - A prior positive response to antidepressants or mood stabilizers
            - High suicide risk
            - Functional impairment
            - History of moderate to severe recurrent depression
            - Prefer pharmacotherapy
            - Failed light therapy or psychotherapy
    - Psychotherapy (SOR:D)
        - No studies have been done to examine the effects of psychotherapy on SAD
        - Psychotherapy does not relate to circadian dysregulation
    - Electroconvulsive therapy (SOR:D)
        - No good data on ECT in patients with SAD
    - Combined therapy (SOR:C)
        - Limited data for combination therapy in SAD
        - Preliminary study of light therapy combined with exercise showed positive results
        - Combined light therapy and pharmacotherapy may allow lower time and dosages of therapy

Follow-Up

1. Return to office
    - Initially, every two weeks for suicidal risk
    - Every month for depression
2. Refer to specialist
    - If patient is complicated with emotional or intellectual problems
    - If patient does not respond to therapies
3. Admit to hospital
    - If patient is a high suicidal or homicidal risk
    - If patient desires inpatient therapies

Prognosis

1. Good with therapy
2. Recurrence is common

Prevention

1. May continue pharmacotherapy throughout the year
2. Move to sunnier areas during winter months

References

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