Medical Treatment of Problem Gambling

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DSM IV: Pathological Gambling

Persistent/maladaptive gambling behavior as indicated by the following:

- Preoccupation with gambling
- Need to gamble in increasing amounts
- Unsuccessful efforts to control/quit
- Restless/irritable when attempting to control/quit
- Provides an escape from problem/mood relief
DSM IV: Pathological Gambling

- After losing returns to get even ("Chasing")
- Lies to conceal extent of problem
- Commits illegal acts to finance gambling
- Relationship, job, occupational problems
- Relies on others to provide money

*The gambling behavior is not better accounted for by a Manic Episode.*
Pathological Gambling: A Pervasive Problem

Prevalence Estimates:
- 1.6 - 3.9% adults
- 3.2 - 8.4% adolescents/young adults
- 7.5 million adults affected
Pathological Gambling: The Price Society Pays

Pathological Gambling:
- Costs society $5 billion annually
- Adds $40 billion in lifetime costs for productivity reduction, social services, creditor losses
- Associated with crime, domestic abuse, depression, bankruptcy, suicide

Prevalence increasing along with gambling opportunities
Pathological Gambling: A Genetic Crap Shoot

In families:

- 20% of first degree relatives (FDRs) of pathological gamblers have PG or problem gambling
- Mood and addictive disorders are present
- Antisocial personality disorder is common
25% - 93% of pathological gamblers have a personality disorder (PD)
15% - 40% exhibit antisocial personality
PD may be unstable over time

There is no “Gambling Personality.”
Gender Differences: The Genetic Role of the Dice

Men:
- Have rates of PG twice as high as those of women
- Choose sporting events, blackjack and cards
- Often report urges to gamble unrelated to their emotional state
Gender Differences: The Genetic Role of the Dice

Women:
- Represent 32% of the pathological gamblers in the USA
- Prefer non-strategic games like bingo and slot machines
- Rapidly progress (telescoping)
Current Gambling Studies of Treatment: Gender Split

Bupropion v. Placebo: 12 Week Study
- 39 subjects
  - 28 male (72%)
  - 11 female (28%)

Escitalopram Open Label: 10 Week Study
- 15 subjects
  - 10 male (67%)
  - 5 female (33%)
Treatment: Few gamble on it…

- 86 – 90% gamble
- Fewer than 10% develop a problem
- Only about 8% of pathological gamblers seek treatment
- Pathological Gambling (PG) not widely recognized as a psychiatric disorder

**Effective treatment is desperately needed.**
Pharmacological Treatment: Not a Sure Bet

- No proven or standard treatment
- Most advice based on anecdotal information or personal experience
- Treatment research relatively recent
Supporting Evidence

1. Case reports, small case series
2. Open-label studies
3. Randomized controlled trials (RCT)

RCTs are the current standard for determining treatment efficacy.
Definitions

Open label study: All participants get investigational drug.

Randomized Controlled Trial: Participants are randomly assigned to receive either the drug or placebo.

Double-Blind Study: Neither participant nor research staff know the drug or placebo assignment.
Wanted: Pathological Gamblers

✦ Recruit via all media
✦ Screening
✦ DSM IV criteria
✦ South Oaks Gambling Screen (SOGS) > 5
✦ Consent process
✦ Ratings (Baseline/Follow-up)
  – YBOCS
  – GSAS
  – CGI

From LOW to HIGH Stakes!
Screening for the Gambler

✦ Which types of gambling have you done?
✦ What is the largest amount of money gambled in one day?
✦ How often do you return to win back money you have lost?
✦ Do you feel like you have a problem with gambling?
Screening for the Gambler

✧ Have you ever claimed to win when you actually lost?
✧ Did you ever gamble more than you intended to?
✧ Have people criticized your gambling?
✧ Have you ever lost time from work due to gambling?
Gambling Symptom Assessment Scale (G-SAS)

The following questions are aimed at evaluating gambling symptoms. Please read the questions carefully before you answer.

1. If you had urges to gamble during the past WEEK, on average, how strong were your urges? Please circle the most appropriate number.

   None  Mild  Moderate  Severe  Extreme
   0  1  2  3  4

2. During the past WEEK, how many times did you experience urges to gamble? Please circle one.
   0) None
   1) Once
   2) Two to three times
   3) Several to many times
   4) Constant or near constant

3. During the past WEEK, how many hours (add up hours) were you preoccupied with your urges to gamble? Please circle the most appropriate number.

   None  1 hr or less  1 to 7 hr  7 to 21 hr  Over 21 hr
   0  1  2  3  4

4. During the past WEEK, how much were you able to control your urges? Please circle the most appropriate number.

   Complete  Much  Moderate  Minimal  No Control
   0  1  2  3  4

5. During the past WEEK, how often did thoughts about gambling and placing bets come up? Please circle the most appropriate number.

   0) None
   1) Once
   2) Two to three times
   3) Several to many times
   4) Constantly or nearly constantly
6. During the past WEEK, approximately how many hours (add up hours) did you spend thinking about gambling and thinking about placing bets? Please circle the most appropriate number.

None  | 1 hr or less  | 1 to 7 hr  | 7 to 21 hr  | Over 21 hr
-----|-----------|--------|----------|----------
  0  |   1       |   2    |     3    |     4    

7. During the past WEEK, how much were you able to control your thoughts about gambling? Please circle the most appropriate number.

Complete  | Much  | Moderate  | Minimal  | No Control
--------|------|----------|---------|------------
  0  |   1  |   2      |     3   |     4      

8. During the past WEEK, approximately how much total time did you spend gambling or on gambling related activities? Please circle the most appropriate number.

None  | 2 hr or less  | 2 to 7 hr  | 7 to 21 hr  | Over 21 hr
-----|-------------|-----------|----------|----------
  0  |   1         |   2       |     3    |     4    

9. During the past WEEK, on average, how much anticipatory tension and/or excitement did you have shortly before you engaged in gambling? If you did not actually gamble, please estimate how much tension and/or excitement you believe you would have experienced, if you had gambled. Please circle the most appropriate number.

None | Minimal | Moderate | Much | Extreme
-----|--------|---------|------|-------
  0  |   1    |   2     |  3   |   4   

10. During the past WEEK, on average, how much excitement and pleasure did you feel when you won on your bet? If you did not actually win at gambling, please estimate how much excitement and pleasure you would have experienced if you had won. Please circle the most appropriate number.

None  | Minimal | Moderate | Much | Extreme
------|--------|---------|------|-------
  0  |   1    |   2     |  3   |   4   

11. During the past WEEK how much emotional distress (mental pain or anguish, shame, guilt, embarrassment) has your gambling caused you? Please circle the most appropriate number.

None Mild Moderate Severe Extreme

0 1 2 3 4

12. During the past WEEK, how much personal trouble (relationship, financial, legal, job, medical or health) has your gambling caused you? Please circle the most appropriate number.

None Mild Moderate Severe Extreme

0 1 2 3 4
Intervention
PG-YBOCS: Yale Brown Obsessive Compulsive Scale

Urges/thoughts:
2. Time occupied
3. Interference
4. Distress
5. Resistance
6. Degree or control

Gambling behavior:
2. Time spent
3. Interference
4. Distress
5. Resistance
6. Degree or control
Scoring on the PG-YBOCS

- 30 - 40 Severe
- 20 - 30 Moderate
- 10 - 20 Mild
- 0 - 10 Within Normal Limits
Practical Reasons for Drug Therapy: Hedging your bet

✶ Importance of biological factors
✶ May help achieve abstinence
✶ Can help provide structure and support to maintain treatment
✶ Economic considerations

“One cannot treat a patient who fails to show up.”

Rosenthal 2004
Treatment Theories

Philosophical approach influences treatment:
- Addiction
- Mood Disorder
- Obsessive-compulsive Spectrum
- ADHD/Impulsivity Phenomenon
Pathological Gambling: An Addiction

Naltrexone:
- Evidence of effectiveness in alcoholism, drug abuse and other disorders in which urges are the dominant symptom
- Dopaminergic function has been implicated in the subjective experience of pleasure and urges
- Naltrexone inhibits dopamine neurons

Kim et al 2001
Pathological Gambling: An Addiction

“The thrill is gone!” This is the characteristic experience of the drug-addicted person on naltrexone.
Pathological Gambling: An Addiction

Naltrexone: Opioid Antagonist
- Case report, open label study, RCT
- Heightened urge may mean increased response
- Significant decline in the urge to gamble
- 75% v. 24% improved
- Black box warning dose dependent
Pathological Gambling: An Addiction

Double-Blind Naltrexone v. Placebo Study

Figure 3. Gambling Symptom Assessment Scale. Maximum score = 80. First visit: naltrexone n = 20, placebo n = 25. Final visit: naltrexone n = 14, placebo n = 22. Significantly different ($z = -2.35$, $p = .019$).

Kim et al 2001
Pathological Gambling: A Mood Disorder

- Clinical features of PG sometimes resemble those of bipolar disorder (BP) and other mood disorders
- Some say that PG is caused by depression
- Frequent comorbidity between mood disorders and PG
Pathological Gambling: A Mood Disorder

- Carbamazepine
  - Single case report with individual improved
- Valproate - lithium trial
  - 68% - 61% responders were much or very much improved (CGI)
  - No significant difference
- Nefazodone
  - 75% responders

Rosenthal 2004
Pathological Gambling: Obsessive-Compulsive Spectrum Relationship

- Thoughts and behaviors resemble obsessions and compulsions
- PG and OCD are frequently comorbid
- PG hypothesized to be part of OC spectrum
Pathological Gambling: Obsessive-Compulsive Spectrum Disorder

Select Serotonin Reuptake Inhibitors (SSRIs):

- **Paroxetine**
  - Kim et al 2002
    - 61% drug v. 23% placebo improved
    - Statistically significant
  - Grant et al 2003
    - 59% drug v. 49% placebo responders

- **Citalopram (Zimmerman et al 2002)**
  - 87% rated as responders on CGI

- **Fluoxetine (de la Gandera 1999)**
  - Drug plus therapy v. therapy
  - Combined treatment superior

Hollander et al 2005
Pathological Gambling: Obsessive-Compulsive Spectrum Disorder

✿ Fluvoxamine (Hollander et al 2000)
  – Double-blind crossover trial
  – Phase I: 75% v. 67% = no difference
  – Phase II: 67% v. 25% = significant difference

✿ Escitalopram (Black et al ongoing)
  – 15 enrolled
  – 75% improved (i.e. CGI = 1 or 2)

Hollander et al 2005
Pathological Gambling: Related to ADHD/Impulsivity

- Bupropion (Wellbutrin SR)
  - Effective in the treatment of ADHD
  - May reduce attentional deficits characteristic of PG
  - Open label (Black)
    • 70% improved
  - Double-blind (Black et al ongoing)
Other Medications

- Olanzapine (atypical antipsychotic)
  - Case study where symptoms were lessened with switch from haloperidol to olanzapine
  - RCT: No difference drug v. placebo

Grant et al 2004
You have to know when to hold ‘em: PG Study Populations

- Difficult to recruit
- Unreliable
- High no show/drop rate (14%- 49%)
- Lack of motivation
- Gambling subtypes

Bottom line: Very problematic study population
You have to know when to fold ‘em:
Other Problems

- High placebo response rate
- Placebo response rate ranges from 23 – 67%
- Hard to show superiority of drug
Reflections

- Difficult for patients to give up something that they like so much.
- Basis of improvement may have to do with regular monitoring and subjective shame.
Cashing in the Chips: Recommendations

✦ Understand the limits of medical therapy
✦ Consider medicine as the adjunct
✦ Evaluate presence of comorbidity in determining medication
  – Depression: SSRIs
  – OC spectrum: SSRIs
  – Substance abuse: Naltrexone
Cashing in the Chips: Recommendations

- The patient who relies only on medication to improve is doing herself/himself a disservice.
- Follow closely; monitor frequently.
- Refer individuals to 800-Bets-off and Gamblers Anonymous.
Increasing the Odds: Future Approaches

- Support the need for medication trials of all types.
- Focus on subtypes: matching patient and pill.
- Solve the problem of dropouts.
- Examine the effect of combined treatments (e.g. medication and CBT).
- Encourage more PG research.
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Questions?