

PHARMACOLOGICAL TREATMENT OF PATHOLOGICAL GAMBLING WITH OXCARBAZEPINE (TRILEPTAL)



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Definition of PG

- ▣ Pathological gambling is characterized by persistent and recurrent gambling and is associated with impaired functioning, reduced quality of life, and high rates of bankruptcy, divorce, and criminal activity. The problem usually begins during adolescence or early adulthood with males tending to start at an earlier age.

Neurotransmitters systems

The roles of neurotransmitters systems involved in pathophysiology of pathological gambling could be synthesized as follows:

- ▣ Norepinephrine: interferes with the arousal reaction and excitatory states;
- ▣ Serotonin: mediates initiation and cessation of behavior;
- ▣ Dopamine: involved in the system of rewards and reinforcements;
- ▣ Opioids: mediate pleasure and impulsivity.

Medication in PG

- ▣ Several medications have been studied as treatments for pathological gambling and the range of medication classes
- ▣ opioid antagonists,
- ▣ serotonin reuptake inhibitors (SRIs),
- ▣ mood stabilizers – that have been tested reflects the different ways pathological gambling is categorized.
- ▣ Because no medication currently is approved by the Food and Drug Administration for treating pathological gambling, patients should be informed of off-label use of medications for pathological gambling, as well as the empirical basis for considering medication as a treatment.

Pharmacological treatments in pathological gambling

Jon E Grant Brian L Odlaug, and Liana R N Schreiber

Br J Clin Pharmacol. 2014 **Conclusions**

- ▣ Research on the pharmacological treatment of PG appears promising, particularly in the case of opioid antagonists. The heterogeneity of PG treatment samples, however, may complicate the identification of effective treatments. As such, researchers and clinicians should be aware of the limitations of our treatment knowledge. Most published studies have employed relatively small sample sizes, are of limited duration and involve possibly non-representative clinical groups (e.g. those without co-occurring psychiatric disorders).

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- ▣ Future research should ensure adequate power through the inclusion of larger sample sizes of individuals with PG who take the study drug for a longer duration of time and are longitudinally assessed over several years. Further, an effort should be made to ensure population-representative samples and a greater effort to include minority groups in clinical trial samples. In addition, response measures have varied across studies

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Br J Clin Pharmacol. 2014 **Conclusions**

- ▣ The use of clinician-administered diagnostic scales for PG should be encouraged as should measures that adequately assess urges to engage in the behavior as these have been shown to impact on treatment efficacy in PG [Grant et al.2008]. At present, issues such as the duration of treatment cannot be sufficiently addressed with the available data. Identification of factors related to treatment response will help inform future studies and advance treatment strategies for PG.

- ▣ The treatment methods currently available in Romania for pathological gambling include:
- ▣ Selective serotonin reuptake inhibitors (Fluvoxamine, Clomipramine, Prozac);
- ▣ Mood stabilizers (Carbamazepine);
- ▣ Individual and group CBT(including REBT);
- ▣ counselling the gambler and his/her family;
- ▣ family therapy.

- ▣ This paper presents personal observations about cognitive-behavioural intervention associated with Oxcarbazepine-type medication in pathological gambling, in 30 clients

- ❑ Oxcarbazepine is structurally a derivative of carbamazepine, adding an extra oxygen atom to the benzylcarboxamide group.
- ❑ This difference helps reduce the impact on the liver of metabolizing the drug, and also prevents the serious forms of anaemia occasionally associated with Carbamazepine.
- ❑ Aside from this reduction in side effects, it is thought to have the same mechanism as carbamazepine - sodium channel inhibition - and is generally used to treat partial seizures in epileptic children and adults.

Methods-Participants

- ▣ The number of the participants aged 18 to 31 years. The Mean age was 23.033 ± 3.65 ;
- ▣ 83,3% were males and 16.7% were females;
- ▣ All from urban zone.
- ▣ ICD-10 was used for the diagnosis of pathological gambling and The 20 GA Questionnaire was applied to all participants in 3 moments:
 - ▣ 1) Before treatment
 - ▣ 2) At 6 Month of treatment
 - ▣ 3) After 1 Year of treatment

Treatment

- ▣ All cases were approached by a two-fold intervention:
- ▣ (1) medication: Trileptal (Oxcarbazepine) in a dosage of 3x1 tb/day (1 tablet=300 mg), for 6 months and
- ▣ (2) cognitive-behavioral therapy (CBT) over 20 sessions, delivered in a 1 session/week format for the first 3 months, followed by 1 session every other week, and by 1 monthly session towards the end. The CBT package comprised hypnosis and self-hypnosis techniques and REBT techniques.

RESULTS

- All the results were analysed with SPSS-20
- Before the treatment the score at 20-GA Questionnaire was 14.900 ± 2.53
- After 6 Month 7.76 ± 3.62
- After 1 Year 6.26 ± 4.34
- 66.67 percent had scores less than 7 at 20-GAQ
- (Only >7 is pathological)

Results-One Sample Statistics

M1	N=30	Mean 14.900	SD 2.53
	T 32.164	Sig(2-tailed) .000	
M2	N=30	Mean 7.76	SD 3.62
	T 11.73	Sig(2-tailed) .000	
M3	N=30	Mean 6.26	SD 4.34
	T 7.89	Sig(2-tailed) .000	

M1=Before treatment, M2=After 6 Month, M3=After 1 Year

Conclusions

- ▣ CBT intervention associated with an off-label type medication-Oxcarbazepine- which proved efficient in pathological gambling, in 30 clients, as gambling abstinence was maintained even at one year after therapy initiation, in 66.67% of cases.
- ▣ **A future perspective should include a control sample for validation of this intervention.**

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