

**Preconference Session:
Calgary Zone Mental Health Day**

Overview of Treatment for Binge Eating Disorder

Allan S. Kaplan MSc. MD FRCP(C)
Senior Scientist, Campbell Family Mental Health Research Institute
Center for Addiction and Mental Health
Director, Eating Disorder Community Treatment Program
Toronto General Hospital
Vice Dean, Graduate Life Science Education
Professor of Psychiatry, Faculty of Medicine
University of Toronto

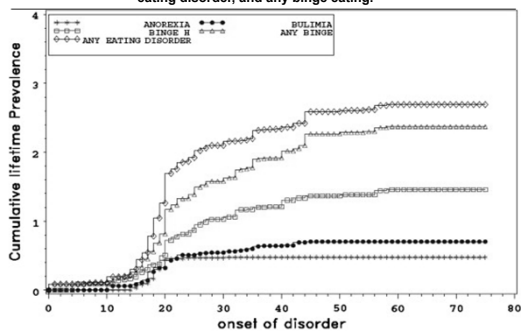


Binge Eating Disorder

Epidemiology:

- BED is more common than the other major eating disorders anorexia nervosa or bulimia nervosa
- Lifetime prevalence of ~3% among women; 2% among men in US (Hudson et al., 2007), and ~2.0% EU (pooled WMH survey; Kessler et al., 2013)
- 75% female, 25% male

The epidemiology of eating disorders in six European countries:
Results of the ESEMeD-WMH project
Cumulative lifetime prevalence of anorexia nervosa, bulimia nervosa, binge eating disorder, and any binge eating.



Preti, et al. Journal of Psychiatric Research, Volume 43, Issue 14, 2009, 1125 – 1132; 2009

Binge Eating Disorder

Comorbidity: Lifetime Prevalence*

- Obesity: 88 % (associated with lower quality of life than obesity without BED)
- Affective Disorder: 68%
- Anxiety Disorder : 42%
- Substance Use: 12 % **
- ADHD 30%

* Hilbert et al, Behavior Therapy and Research, 2011
** Yanovsky S Am J Psych. 1993

Binge Eating Disorder

Current clinical experience in North America:

- Most individuals with BED do not realize they have an eating disorder
- As a result, individuals with BED do not seek treatment from eating disorder clinics/programs
- When they do seek help, it is usually for obesity treatment for weight loss, including bariatric surgery, or for another comorbidity
- We as professionals in the field have an important responsibility to educate the public and primary care providers about BED and its treatment

Psychological Treatments for Binge Eating Disorder

- CBT remission rates 70%
- IPT remission rates 70%
- DBT remission rates 60%
- Self Help – remission rates 68%

No significant loss of weight from psychological treatment

Cognitive Behavior Therapy for BED

- Meta-analysis of 19 RCT studies utilizing CBT for BED show highest rates of abstinence from binge eating with CBT compared to all other treatments (IPT, psychoanalytic therapy, psycho education, meditation)
- Also improvements in eating and body related cognitions
- No impact on body weight found
- CBT first line of treatment

Drug Treatment of Binge Eating Disorder

Goals of Pharmacotherapy in BED

- Efficacy in reducing binge eating
- Efficacy in maintaining abstinence from binge eating
- Efficacy in treating comorbid psychopathology, including weight loss/ obesity
- Efficacy in treating the core disturbances in BED: affect regulation, self esteem, impulsivity
- Tolerability and safety

Randomized Placebo Controlled Trials of Medication in Binge Eating Disorder (N=26 placebo controlled RCTs)

- TCA- 3 studies: (desipramine 2 , imipramine 1): drug > placebo for binge frequency. Total N = 95. Remission rates : 40 % versus 22% for placebo no significant weight loss
- SSRI – 9 studies: (citalopram 1, escitalopram 1, fluvoxamine 3, fluoxetine 3, sertraline 1). 4 of 7 showed drug > placebo for binge frequency; 2 did not measure binge frequency. Total N= 527
- SNRI- 5 studies: (atomoxetine 1, sibutramine 4) 3 of 4 showed drug > placebo for binge frequency . 1 study did not measure binge frequency. Total N= 453

Randomized Placebo Controlled Trials of Medication in Binge Eating Disorder

- Antiepileptics: 5 studies (topiramate 3, lamotrigine 1, zonisamide 1) 3 of 5 showed drug > placebo for binge frequency. 1 was negative (lamotrigine), 1 did not measure binge frequency . Total N= 639
- Weight Loss/Obesity Drugs:
 - Orlistat 4 studies ; only one study measured binge frequency and showed drug > placebo Total N= 728
 - d-fenfluramine 1 study, drug > placebo binge frequency N=28
- Other drugs, not placebo controlled RCTs :
 - Venflaxamine- reduced binge eating
 - Baclofen- reduced binge eating
 - Reboxetine – reduced binge eating
 - Naloxone – negative study
 - Rimonabat- withdrawn from market
 - Acamprosate- negative study

Current Status: Pharmacologic Treatments for Binge Eating Disorder

1. Until very recently, RCTs characterized by small samples, brief treatment and no long term follow
3. Overall, pooling all studies, approximately 45 % of subjects receiving medication achieved 100 % remission from binge eating compared to 28% on placebo
4. Across all studies, mean weight loss was 3.4 kg greater on drug vs placebo, with SSRI < antiepileptic < antiobesity drugs
5. Anticonvulsants (Topiramate) most effective in reducing binge eating and inducing weight loss but limited by SEs
6. Obesity drugs- Orlistat – limited by side effects; Sibutramine/fenfluramine - removed from market because of cardiac complications
7. No apparent advantage of drug added to CBT
8. No published trials of maintenance therapy
9. Treatment with psychostimulants show promise with recent RCTs demonstrating efficacy in BED

Innovative New Pharmacologic Treatment for Binge Eating Disorder

High rates of comorbidity of BED and ADHD:

- Obesity, BED, and ADHD commonly co-occur (30%), and symptoms of ADHD have been proposed to contribute to the disinhibited eating characterizing binge eating and weight gain
- BED and ADHD are both characterized by dopamine deficiency and heightened reward sensitivity (“ reward deficiency syndrome” and deficient tonic DA signalling) as well as impulsivity, both of which are associated with overeating
- Psychostimulant medications , utilized to manage ADHD, target the dopamine system, and have been associated with increased behavioural regulation and decreased appetite and weight

Lisdexamfetamine (Vyvanse) in the Treatment of BED (McElroy et al 2015)*

Methodology:

- Multicenter, randomized, double blind, parallel group, forced dose(30mg, 50mg, 70mg/day) titration, placebo controlled clinical trial
- 30 sites, 255 subjects with BED treated for 11 weeks; 3weeks titration and 8 weeks maintenance
- Exclusion criteria: any comorbid psychiatric condition
- Efficacy - change from baseline to endpoint in number of binge days/week
- Psychometric measures: CGI; TFEQ; YBOCS-BE; Impulsivity Scale(BIS); MADRAS; HAM -A; QOL (SF-12)

* JAMA Psychiatry 2015 :72 : 235-246

Lisdexamfetamine (Vyvanse) in the Treatment of BED (McElroy et al 2015)*

Results:

- 50 mg and 70 mg groups significantly greater reduction in binge eating compared to 30mg and placebo treated groups
- Cessation rates at 4 weeks: 70mg (50%) > 50mg (47%) > 30mg (35%) > Placebo (21%)
- Global improvement greater in 50mg and 70 mg groups compared to 30mg and placebo treated groups
- 1.5% participants had serious treatment emergent adverse effects (consistent with findings in adults with ADHD treated with this drug)

Results of this and one other study lead to FDA approval of Vyvanse for BED (January 30, 2015) – only FDA approved drug for BED

* JAMA Psychiatry 2015 :72 : 235-246

RCT of Long Acting Methylphenidate Compared to CBT in the Treatment of BE

Quilty L, PI; Kaplan A, Davis Co-'s; Ontario Mental Health FD)

Aim: To evaluate the therapeutic effect of long acting methylphenidate compared to CBT in patients with BED.

Hypotheses:

- Subjects who are randomized to receive long acting methylphenidate will demonstrate significant decrease in binge eating episode frequency and BED severity
- Pre-treatment ADHD symptom severity will be associated with a preferential treatment response to medication as compared to CBT
- Pre-treatment depression symptom severity will be associated with a preferential treatment response to CBT as compared to medication

RCT of Long Acting Methylphenidate Compared to CBT in the Treatment of BED

Protocol:

CBT treatment:

Participants randomly assigned to receive individual CBT will attend 16 50-minute appointments over the course of 12 weeks

Medication :

Participants randomly assigned to receive long acting methylphenidate will attend weekly appointments with study psychiatrists for the first four weeks, and then biweekly appointments for the last eight weeks.

Dosage will be 18 mg/day, to be increased to 36 mg/day at week 2, 54 mg/day at week 3, and 72 mg/day at week 4. Dosage levels may be maintained or decreased to manage medication side effects.

RCT of Long Acting Methylphenidate Compared to CBT in the Treatment of BED

Measurements:

- ADHD Symptoms:
 - Wender-Utah Rating Scale
 - Conner's Adult ADHD Scale
- Eating Symptoms: Eating Disorder Examination
- BMI
- Mood : Hamilton rating Scale for Depression;
Beck Depression Inventory
- Anxiety : Beck Anxiety Inventory
- Quality of Life : Quality of Life Inventory

RCT of Long Acting Methylphenidate Compared to CBT in the Treatment of BED

Inclusion criteria:

1. DSM-5 criteria for BED
2. Binge episodes at least three days per week during the past two weeks
3. BMI ≥ 25
4. 18 to 50 years of age
5. Fluent in reading English
6. Capacity to give informed consent

RCT of Long Acting Methylphenidate Compared to CBT in the Treatment of BED

Exclusion criteria:

1. Pregnancy or lactation
2. Psychotherapy or behavioural treatment for eating or weight initiated during the past three months
3. Psychotropic medications during past 4 weeks or use of psychostimulants to manage eating or weight past 6 months
4. Current mania, psychosis, substance dependence, or dementia
5. Current severe suicidality or homicidality
6. Current medical conditions that affect weight or BED symptoms or are contraindicated for methylphenidate such as diabetes or thyroid disease
7. Cardiac illness such as myocardial infarction or stroke during the past six months
8. History of seizures
9. Uncontrolled hypertension (>160/100), tachycardia (heart rate > 110), arrhythmias or conduction abnormalities
10. Current medications that affect weight

Long Acting Methylphenidate in BED: Preliminary Results

Participants:

- **N = 16 females randomized to drug, age 18-55 years ($M = 28.44$; $SD = 7.64$)**
- **DSM-5 diagnosis of BED**
- **50% met criteria for a comorbid condition**
 - **Mood Disorders: MDD: $n = 1$; Dysthymic Disorder: $n = 1$; Depressive Disorder NOS: $n = 1$**
 - **Anxiety Disorders: Social Phobia = 1; PTSD: $n = 1$; GAD: $n = 1$**

Long Acting Methylphenidate in BED: Preliminary Results

1. BMI and Weight at Week 0, 6, and 12:

	Week 0 ($n=16$)	Week 6 ($n=9$)				Week 12 ($n=7$)			
	$M (SD)$	$M (SD)$	t	p	d	$M (SD)$	t	p	d
BMI	36.56 (6.70)	34.49 (6.40)	.75	ns	.33	28.31 (6.70)	1.89	.07	.9
Weight (lbs)	221.25 (40.91)	209.22 (34.47)	.74	ns	.32	168.86 (82.69)	2.06	.05	.98

2. Binge Frequency at Week 0, 6, and 12:

	Week 0 $n=15$	Week 6 $n=9$				Week 12 $n=7$			
	$M (SD)$	$M (SD)$	t	p	d	$M (SD)$	t	p	d
Binge/Week	19.13 (11.67)	5.44 (9.11)	3.00	<.01	1.32	3 (3.74)	3.53	<.01	1.7

Questions/ Discussion ????

