SYSTEMATIC REVIEW OF THE EFFICACY OF ARIPIPRAZOLE FOR THE TREATMENT OF ANOREXIA NERVOSA

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Declaration of interest – Dr Richard Whale has received speaker honoraria from Lundbeck and Otsuka.

BACKGROUND

• Changes in brain dopaminergic function have been implicated in the pathophysiology of anorexia nervosa from both preclinical and clinical studies (Kontis 2012:496-515, Brewerton 2012:398 405)
• Therapeutically, olanzapine has been a focus of clinical research with mixed efficacy findings (Kish 2012:e757–e66, Brewerton 2012:398 405, Dold Psychotherapy and Psychosomatics 2015)
• Aripiprazole, as a D2 receptor partial agonist, may have additional benefit via dopaminergic modulation and be more favourable in this patient population due to less associated weight gain

AIMS

• To undertake a systematic review of the available literature of the efficacy of aripiprazole in the treatment of anorexia nervosa, in all age groups, clinical settings, languages and genders.

METHOD

• CINAHL, EMBASE, MEDLINE, PsycINFO and the Cochrane database were searched using the search terms Anorexia nervosa, eating disorders, antipsychotics, aripiprazole (and its generics).
• Randomised controlled studies were sought primarily but all study types were included. Enquiries were made with pharmaceutical companies, experts in the field and other relevant researchers.

RESULTS

• The only studies available were retrospective chart reviews and case reports/series.
• No published studies met the primary inclusion criteria of randomised placebo controlled trials.
• Results from one proposed randomised study were unavailable and authors did not respond to requests for information/ had no further data to add.
• Eight primary reports were found where aripiprazole was used to treat symptoms of anorexia nervosa.
• Aripiprazole showed a positive effect on various eating disorder symptoms including weight gain, binge eating, purging and body image distortion.
• In addition, aripiprazole was observed to aid the refeeding process, increase social functioning, increase insight and was found to be acceptable to the patient group.

CONCLUSIONS

• Whilst positive outcomes for the use of aripiprazole in anorexia nervosa were identified, clear conclusions or recommendations cannot be made due to the inherent reporting bias, small sample sizes and lack of randomisation or blinding in the studies reported.
• Randomised studies are indicated to explore this further.

REFERENCE & DESIGN

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>INTERVENTION</th>
<th>COMPARISON</th>
<th>OUTCOME</th>
<th>RISK OF BIAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorexia Nervosa N=42 Male (27) Female (15)</td>
<td>Aripiprazole dose not listed</td>
<td>Nil</td>
<td>Tested for discharge, improved (achieved ideal body weight, stabilised mood, reduced eating disorder symptoms/ achieved remission or reduced suicidal ideation), no change or decompensation from admission. 30% of inpatients on an antipsychotic were rated as improved.</td>
<td>Selection bias – high risk Performance bias – high risk Detection bias – high risk</td>
</tr>
<tr>
<td>Anorexia Nervosa N=22 Adult outpatients</td>
<td>Aripiprazole</td>
<td>Olanzapine</td>
<td>Nil available</td>
<td>Atriplin bias – high risk</td>
</tr>
<tr>
<td>Anorexia Nervosa N=15</td>
<td>Aripiprazole 30mg daily duration 6 months + Carbamazepine + Escitalopram + Pioglitazone + Risperidone</td>
<td></td>
<td>Nil</td>
<td>Selection bias – high risk Publication bias – high risk</td>
</tr>
<tr>
<td>Anorexia Nervosa N=15 Female Adolescents</td>
<td>Aripiprazole 1-10mg Duration: 3mths to 18mths</td>
<td></td>
<td>Nil</td>
<td>Increase in BMI of 2.4 points (average 3)</td>
</tr>
<tr>
<td>Anorexia Nervosa N=15</td>
<td>Aripiprazole 6-months</td>
<td></td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td>Anorexia Nervosa total/sample 75, N=2 Female outpatients</td>
<td>Aripiprazole 5 mg/day</td>
<td></td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td></td>
<td>Aripiprazole added to treatment of anxiety</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STUDY SELECTION

Records identified through on line databases (n=107)
Records after duplicates removed (n=107)
Records screened (n=107)
Records excluded (n=56)
Full text articles assessed for eligibility (n=51)
Full text articles excluded with reasons (n=15)
Studies of anorexia nervosa and aripiprazole (n=8)
Studies included in quantitative synthesis (meta-analysis) (n=7)

DETECTION

Additional records identified through other sources (n=154)

IDENTIFICATION

Chart review, poster presentation

SCREENING

Full text articles excluded with reasons (n=15)

ASSESSMENT

Studies of anorexia nervosa and aripiprazole (n=8)

INTERVENTION

Aripiprazole + venlafaxine

COMPARISON

Olanzapine + SSRIs

OUTCOME

- Reduced body image distortion N=3
- Increased insight N=1
- Improved appetite N=1
- Improved social functioning N=3
- Reduced anxiety N=2
- Weight gain: percentage change in BMI from 8 points to 13 points, average 10.75
- Reduced body image distortion N=3
- Increased social functioning N=1
- Improved insight N=1

REFERENCES

Gable 2005: Psychological medication use: A Retrospective chart review and descriptive data analysis.
Brewerton 2012:398 405, Dold Psychotherapy and Psychosomatics 2015
Kontis 2012:496-515
Raynaud Syndrome.