Obsessive Compulsive Disorder: a pharmacological treatment approach

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Outline of presentation

1. OCD: comment on its current status
2. OCD: a model for intervention
3. OCD: a medication approach (Australian perspective)
1. **OCD: comment on its current status**

- boys and girls may need to be understood separately
- boys - greater genetic contribution
- girls - greater environmental contribution
- balance of psychosocial and medication treatments may differ
1. **OCD: comment on its current status**

- basal ganglia: a primary brain region that is dysfunctional with striatum more active, GP less active
- thalamus and prefrontal cortex (dorsolateral, orbitofrontal, ACC) more active
- this neural network a main focus for treatment

- serotonin and glutamate transporter genes implicated along with dopamine postsynaptic receptors
- interplay between and balance of these neurotransmitter systems in this neural network a main focus for treatment
1. **OCD: comment on its current status**

   - attentional set shifting and working memory are key cognitive executive functions as targets for treatment
2. **OCD: a model for intervention**

OCD and its key comorbid conditions need to be treated:

- ADHD: inattentive or combined type
- tic disorders
- anxiety and/or depressive disorders
The two main components of the epigenetic code

DNA methylation
Methyl marks added to certain DNA bases repress gene activity.

Histone modification
A combination of different molecules can attach to the ‘tails’ of proteins called histones. These alter the activity of the DNA wrapped around them.
2. **OCD: a model for intervention**

-assessment and treatment focuses on delineation of *risk* factors and *resilience* factors—*biologically* (eg, executive function deficits; good arousal regulation) *psychologically* (eg, internalise blame; balanced critical self-reflection) and *socially* (eg, inhibited, rigid, critical interpersonal environment; confiding, nurturing consistent interpersonal environment)

-*monitoring* of these risk and resilience factors and their response to treatment through *developmental phases*
2. **OCD: a model for intervention**

-a practical approach

[A] psychological and social treatment approach implemented for 4-6 weeks (may take 6 months of new habit formation before sustained behavioural change) and if it is beginning to help continue for 12 weeks

*key elements are the interpersonal and the intra-individual milieu*

**interpersonal:** exposure and response prevention, positive reinforcement, response cost, contingency planning (turn taking, active listening, active ignoring, empathy skills, etc), making and keeping friends

**intra-individual:** controlled breathing, muscle biofeedback, guided visual imagery
2. **OCD: a model for intervention**

- a practical approach

[B] key other vulnerabilities addressed – vision, hearing, specific verbal and/or visuospatial learning difficulties, developmental coordination difficulties, speech and language difficulties
2. **OCD: a model for intervention**

a practical approach

[C] medication use to facilitate availability of the young person to learn from the psychological and social interventions through

- better arousal regulation
- better mood regulation
- better executive functioning
2. OCD: a model for intervention

**Summary**
- medication can aid a child’s ability to invest in a psychosocial treatment program and learn from this program
- can take 6 months of practice before new habits are formed
- biological and psychosocial treatments maximize resilience and minimize risk factors through complimentary effects on the brain and the mind. Epigenetics suggests that some of these effects are shared
3. OCD: a medication approach (Australian perspective)

- SSRI medication is the first line treatment

  approved forms: sertraline, fluvoxamine
  both short half lives: sertraline (24 hrs) fluvoxamine (15 hrs)

  clear and substantial evidence for efficacy after gradual increase to therapeutic dose for treatment periods of approximately 3 months with treatment continued for at least 6 months after remission of symptoms
3. **OCD: a medication approach (Australian perspective)**

- **SSRI medication is the first line treatment**

  sertraline and fluvoxamine have a similar clinical effect although individual preferences manifest and should be taken into account

  start at \( \frac{1}{4} \) to \( \frac{1}{2} \) adult starting dose with a gradual increase in dose by \( \frac{1}{4} \) to \( \frac{1}{2} \) tablet every 4-7 days (x5 half lives) until clinical effect achieved over 12 weeks

  gradual withdrawal of medication recommended when it is to be ceased
3. OCD: a medication approach (Australian perspective)

- SSRI medication benefits

  - decrease core symptoms of OCD
  - decrease aggression
  - increase quality of social interactions
  - increase compliance

- SSRI medication indications

  OCD diagnosis and psychosocial interventions insufficient
3. OCD: a medication approach (Australian perspective)

- SSRI medication adverse effects

nausea, dizziness, lightheadedness, initial insomnia or hypersomnia,

nervousness, restlessness, sweating, agitation dysphoria, easy crying, depressive symptoms, stomach ache, headache, rash, motor tics, mannerisms

in overdose: delirium, sweating, tremor, twitching, vomiting
3. OCD: a medication approach (Australian perspective)

- SSRI medication adverse effects

  suicidal ideation (and attempts):
  evident within first 5 days because inner tension, restlessness, ‘on edge’ feeling that grows
  Rx: stop medication and trial another

  epileptic seizures
  psychotic episodes
  abuse potential

  not adverse effects but careful initial and subsequent monitoring needed in vulnerable patients
3. **OCD: a medication approach (Australian perspective)**

- Another SSRI is the second line treatment

  fluoxetine is the first choice because of its longer half life and efficacy in depressive disorders in children and adolescents

  common adverse effects: nausea, drowsiness, initial insomnia, dizziness, lightheadedness
3. **OCD: a medication approach (Australian perspective)**

- **Clomipramine is a third line treatment**

  tricyclic compound with predominantly serotonergic effects rather than noradrenergic effects (increased functional activity)

  start low go slow finish slow use as for the SSRIs

  careful past medical history and family history and ECG to exclude risk of or presence of cardiac conduction anomalies
3. OCD: a medication approach (Australian perspective)

- Adequately treat comorbid disorders

  ADHD

  Tic disorders

  Anxiety disorders

  Depressive disorders

  Autistic spectrum disorders
3. **OCD: a medication approach (Australian perspective)**

- Adequately treat comorbid disorders

**ADHD**

- stimulant medication
  - atomoxetine
  - clonidine
  - imipramine
  - risperidone

- beware drug interactions and potential compound adverse effects
3. OCD: a medication approach (Australian perspective)

- Adequately treat comorbid disorders

Tic disorders

- risperidone
- clonidine
- haloperidol
- pimozide

- beware drug interactions and potential compound adverse effects
3. OCD: a medication approach (Australian perspective)

- Adequately treat comorbid disorders

  Anxiety and depressive disorders

- Similar medication used although fluoxetine first line when comorbid depressive disorders present
3. OCD: a medication approach (Australian perspective)

- Adequately treat comorbid disorders

  Autistic spectrum disorders

  - risperidone more likely to be used especially if irritability and/or affective instability present
3. OCD: a medication approach (Australian perspective)

Conclusion

- start low, go slow, finish slow, *although ensure optimal doses are used*

- medication facilitates each child’s ability to learn in the classroom, playground and home environment: new habits can take 6 months to evolve

- Comprehensively assess and treat with approved medication and/or psychosocial treatments all comorbid conditions