Antipsychotics and Autism
John C C Chan

Objectives
- Rationale behind using antipsychotics
- Usage & Evidence
- Issues

Antipsychotics
- ~20% of Special Ed ASD students on antipsychotics (Witwer et al. 2005)
- Psychostimulant worsen ASD (Campbell et al. 1976)
- D2 blockade? improve ASD but controversial (McDougle et al. 2005)
Antipsychotics

- Serotonergic abnormality
- Lessen EPS with Serotonin-Dopamine Antagonist (SDA)
- SDA good for both positive and negative symptoms (anhedonia, avolition, apathy)
- ??? Good for ASD ???

Haloperidol

- Typical antipsychotics
- Lower dose of Haloperidol +++ for withdrawal and stereotypy in children (Campbell 1978)
- The result was repeated (Cohen et al. 1980)

Haloperidol

- Effective on hyperactivity and irritability (Guy 1976)
- Significant side effect (sedation and dystonia, dyskinesia)
Pimozide

- Multiple centre double blind placebo controlled crossover study
- As effective as haloperidol in children with ASD (Naruse et al. 1982)
- Side effect (sleepiness)

Clozapine

- Risk of agranulocytosis, risk of seizures
- Only letters to the editors
- Three children with autism Rx - 2 got better (Zuddas et al. 1996)
- 17 yr severe ASD (Chen et al. 2001)
- 32 yr severe ASD (Gobbi et al. 2001)
- Improvement in SIB, Aggression, destructive behaviour

Risperidone

- Double blind placebo controlled trial on children by RUPP - reduction in aggression (McCracken et al. 2002)
- Canadian multicenter placebo controlled study on children - reduction on aggression, irritability and hyperactivity (Shea et al. 2004)
- Placebo controlled trial on adults - reduction in aggression and anxiety/depression (McDougle et al. 1998)
- Side effects +
Olanzapine

- Open label study C&A - improvement in overall symptoms (Potenza et al. 1999)
- Open label study C&A [olz vs hal] - improvement in overall symptoms (Malone et al. 2001)
- Open label study C&A with lower responds rate (Kemner et al. 2002)
- Number of case review shows effectiveness of olanzapine but side effect +++

Quetiapine

- Four open label trials
  - Martin et al. 1999; Findling et al. 2004; Corson et al. 2004 & Hardan et al. 2005
- No control trials to date
- Side effect are prohibiting for use at times
- May be effective for individual cases but no strong evidence.

Ziprasidone

- Open label case study in children - improvement in aggression, agitation, irritability (McDougle et al. 2002)
- Open label case study in adult - switching from clz, risp or quet to zip (Cohen et al. 2004)
Aripiprazole

- Small Open label case study in adult - improvement in aggression, agitation, irritability (Stigler et al. 2004)
- Open label case study in adolescents with Asperger’s disorder (Stigler et al. 2004)

Conclusion

- Haloperidol and risperidone both efficacious
- But risk of TD, EPS, hyperprolactinemia & weight gain can be troublesome
- Pros and cons of med use needed to be carefully considered