Introduction

- #s of prescriptions for psychoactive meds have increased x2-3 in last 10 years
- Ability to diagnose psychiatric disorders in children/adolescents has also increased over last 20 years
- Growing awareness that psychiatric disorders do not just start in adult years, that almost all “adult” psychiatric disorders also appear in childhood, that they often start in childhood
- Growing awareness that drug abuse in children/adolescents is often an expression of comorbid psychiatric disorder
- Growing awareness that psychiatric disorders untreated in children & teens are correlated with severely disrupted adult behavior; and if treated in childhood, this adult disruption in behavior is often markedly improved
- Unfortunately, drug studies in children/teens are just now appearing
- Often a combination of both pharmacotherapy and cognitive-behavioral therapies work best for children/teens, and more often involve families and school systems (vs. in adults)
- Some drug side-effect issues are different for children/teens vs. adults

Discuss in greater depth treatment of:

- Behavioral and Aggressive Disorders
- Autism and other Pervasive Developmental Disorders
- Attention Deficit Hyperactivity Disorder
- Depression
- Anxiety Disorders
- Bipolar Disorder
- Psychotic Disorders
Behavioral & Aggressive Disorders

? Conduct disorder: aggression, antisocial behavior (e.g. fire-setting, stealing, vandalism, truancy, rule breaking, fighting, lying, etc.
? Likely to show other problems (drug abuse, hyperactivity, depression)
? Correlated with adult criminal behavior if conduct disorder starts prior to age 12 years
? 50% of untreated conduct disorder children progress to diagnosis of antisocial personality disorder as adults
? Child with untreated conduct disorder become less response to treatment interventions as they age; so early intervention better than later
? Bullying behavior associated with poor psychosocial skills
? Being bullied correlated with higher depression and lower self-esteem at adults (23 years)
? Treatments: psychostimulants, even in absence of ADHD
? Therapeutic use of psychostimulants reduces risk of subsequent substance abuse
? Atypical antipsychotics (e.g. olanzapine/Zyprexa) and maybe anticonvulsant neuromodulators (e.g. gabapentin/Neurontin) may also prove helpful

Autism & Other Pervasive Developmental Disorders

? Autism: complex disorder, deficits in social interaction and speech & communication skills, repetitive behaviors, and restricted interests
? 3.4 cases per 1000 children, 3-4 boys to 1 girl
? Traditional treatment: haloperidol/Haldol and other traditional antipsychotics
? Atypical antipsychotics also efficacious (e.g. risperidone/Risperdal, olanzapine/Zyprexa, ziprasidone/Geodon), the latter without weight gain

buspirone/BuSpar and neuromodulators mood stabilizers (esp. in persons with abnormal EEGs) will perhaps also be efficacious
**Attention Deficit Hyperactivity Disorder**

? Includes inattention (75%), hyperactivity (55%), & impulsivity (60%)

? Most common of psychological disorders of childhood (3-10%), more common in boys than girls

? 15-70% are treated with psychostimulants as children

? Persists into adulthood in 40-60% of cases

? Associated with antisocial personality, institutionalization for delinquency, & incarceration

? Two-thirds of children with ADHD have comorbid problems: conduct disorder, oppositional defiant disorder, learning disorders, anxiety disorders, mood disorders (esp. depression), and substance abuse

? Data support a genetic component (many with + family pedigrees)

? Focus currently on DA4 RS gene

? Treatment: **psychostimulants** (as good as psychostimulants + intensive behavioral treatment, better than behavior treatment alone)

? Psychostimulants ☑️ mild growth suppression (& insomnia)

? Use of psychostimulants correlated with 2x less risk for later substance abuse

? **methylphenidate/Ritalin** (incl. **Concerta SR**) (blocks DA reuptake), amphetamines (**dextroamphetamine/Dexedrine, Adderall, Adderall SR**)

? If child is treatment resistant to above, can also try tricyclic antidepressants (esp. nortriptyline/Pamelor or Aventyl), bupropion/Wellbutrin SR, carbamazepine/Tegretol, clonidine/Catapres or guanfacine/Tenex, modafinil/Provigil, atomoxetine/Strattera or reboxetine/Vestra or Edronax
Depression in Children & Adolescents

? Prevalence estimated at 2% in children and 8% in adolescents
? Estimate that 20% of adolescents have had at least one episode of major depression by age 18 years, with 65% reporting less severe transient sx of depression
? Anhedonia in children is a specific marker for depression in future
? In grade-school children can clearly diagnose depression (equal #s in boys and girls); in teens, 2 girls to 1 boy (same as adult #s)
? 50% - 80% have + family pedigrees for depression
? Untreated depression ☢ high risk for school failure, social isolation, promiscuity, self-medication (drug abuse), and suicide
? Suicide is 3rd leading cause of death in 10-24 yr. olds
? Treatment: usually SSRI is first choice (esp. fluoxetine/Prozac)
? Should use Prozac with psychological therapy (because latter is as effective as Prozac, and because need careful monitoring of medication compliance and suicidal thoughts/behavior)
? Warnings against using paroxetine/Paxil
? Older MAOIs are also effective (concern about dietary restrictions and compliance)
? Newer SNRIs (atomoxetine/Strattera, reboxetine/Vestra or Edronax) may also prove effective, need more data
? Comorbid anxiety: treat with fluoxetine/Prozac (effect for treating both conditions)
? Comorbid ADHA: treat with psychostimulants (if both improve, then leave on psychostimulants; if neither improve, then switch to Prozac; if ADHD improves but depression does not, then add Prozac)
Anxiety Disorders in Children and Adolescents

- Prevalence estimated at 6% to 18%
- Clear associations between untreated anxiety disorders in childhood/teen years and later persistent anxiety disorders, major depression, drug use/abuse, suicide, educational underachievement, and early parenthood – i.e. these problems do not go away
- GAD – 50% also have comorbid depression
- Treatment of GAD: buspirone/BuSpar is effective, as are SSRIs (fluoxetine/Prozac, and esp. venlafaxine/Effexor SR)
- Treatment of Social Anxiety Disorder: beta-blockers (e.g. propranolol/Inderol), SSRIs, MAOIs, and BZDs; should also include concomitant cognitive-behavioral therapy, social skills training, and exposure in vivo therapy
- Treatment of OCD: combination of behavioral therapy and an SSRI (fluvoxamine/Luvox, paroxetine/Paxil, and sertraline/Zoloft) and clomipramine/Anafranil

Bipolar Disorder in Children and Adolescents

- High overlap with ADHD, disruptive behaviors, and substance abuse
- Underdiagnosed and misdiagnosed
- Aggressive & explosive behaviors, elation & grandiosity can be signs of manic sxs; if these sxs develop when depressive sxs are treated either with psychostimulants or antidepressants, then child/teen is likely to later develop classic bipolar disorder
- Treatment: lithium, antimanic anticonvulsants (e.g. valproic acid/Depakote or Depakene), although all can cause weight gain; topiramate/Topamax is good because is associated with weight loss;
- May also use atypical antipsychotic as adjunctive therapy
- Pharmacotherapy should be accompanied by psychotherapy
- Since there is a strong genetic factor in bipolar disorder, psychotherapy should also involve family when possible
Psychotic Disorders in Children and Adolescents

? About 33% of adult schizophrenics developed their sxs of psychosis between ages 10 – 20 years

? Both childhood and adolescent onset schizophrenia are associated with poor long-term outcomes, so early intervention is better (appropriate and maybe more effective)

? Treatment: with **newer atypical antipsychotics** (clozapine/Clozaril, risperidone/Risperdal, olanzapine/Zyprexa, and quetiapine/Seroquel)

? Avoid traditional antipsychotics (which are effective but have bad extrapyramidal side effects)