

Acute Stress Disorder (ASD)

- TREATMENT
- Same as treatment for PTSD

MANAGEMENT OF ANXIETY DISORDERS

2-10-2012

Anxiety disorders

- **Panic disorder**
- **Agoraphobia**
- **Specific and social phobias**
- **Obsessive compulsive disorder (OCD)**
- **Posttraumatic stress disorder (PTSD)**
- **Acute stress disorder (ASD)**
- **Generalized anxiety disorder (GAD)**
- **Anxiety disorder secondary to general medical condition**
- **Substance-induced anxiety disorder**

Management

- **Pharmacological**
- **Non-pharmacological therapy**

Pharmacotherapy

- 1- Benzodiazepine
 - 2- Buspirone (BuSpar)
 - 3- Selective Serotonin Reuptake Inhibitors **SSRI** (*Discussed*)
 - 4- Tricyclic Antidepressants **TCA**
 - 5- Monoamine Oxidase Inhibitors **MAOI**
 - 6- Beta blockers
 - 7- Anti-convulsant
 - 8- Atypical anti-depressant
- Barbiturate !!!

ANXIOLYTICS/HYPNOTICS

- **Benzodiazepines (BDZs)**
- **Propranolol**
- **Buspirone**

- Anxiolytics, including benzodiazepines, barbiturates, and buspirone, are the most widely prescribed psychotropic medications. In general, they all work by diffusely depressing the CNS, causing a sedative effect.
- Common indications for anxiolytics/hypnotics include:
 - Anxiety disorders
 - Muscle spasm
 - Seizures
 - Sleep disorders
 - Alcohol withdrawal
 - Anesthesia induction

Benzodiazepines (BDZs)

- Benzodiazepines are first-line anxiolytics.
- Advantages include safety at high doses (as opposed to barbiturates).
- A significant limitation is imposed on the duration of BDZ use due to their potential for tolerance and dependence after prolonged use.
- Benzodiazepines work by potentiating the effects of GABA.

Examples of BDZs

Long Acting (1 to 3 Days)

- *Chlordiazepoxide (Librium)*—used in alcohol detoxification, presurgery anxiety
- *Diazepam (Valium)*—rapid onset, used in treatment of anxiety and seizure control
- *Flurazepam (Dalmane)*—rapid onset, treatment of insomnia

Intermediate Acting (10 to 20 Hours)

- *Alprazolam (Xanax)*—treatment of panic attacks
- *Clonazepam (Klonopin)*—treatment of panic attacks, anxiety
- *Lorazepam (Ativan)*—treatment of panic attacks, alcohol withdrawal
- *Temazepam (Restoril)*—treatment of insomnia

Short Acting (3 to 8 Hours)

- Oxazepam (*Serax*)
- Triazolam (*Halcion*)—rapid onset, treatment of insomnia

Side effects of BDZ

- Drowsiness,
- impairment of intellectual function,
- reduced motor coordination.

- *Toxicity: Respiratory depression in overdose, especially when combined with alcohol*
- *Maysethina graves , suppressed respiration*



BDZs can be lethal when mixed with alcohol.

SSRI

- MOA: inhibits the presynaptic serotonin pumps increasing the availability in the synaptic clefts.
- The most commonly prescribed anti-depressant due to:
 - Low incidence of side effects.
 - No food restrictions.
 - Much safer in overdose.
 - Can be given in pregnancy, lactation, safe in young and elderly.

□ Examples

- **Fluoxetine** (longest half life and the most activating)
- **Sertraline** (GI disturbance)
- **Paroxetine** (most serotonin specific)
- **Fluvoxamine**
- **citalopram**
- **Escitalopram**

Uses of SSRI

1- depression in children above 6 years (fluoxetine) and adults


2- some anxiety disorder

⊙ for OCD → all are effective. But if a child has OCD our first choice will be sertraline then fluvoxamine and finally citalopram.

⊙ panic disorder → paroxetine and sertraline

⊙ agoraphobia, social anxiety, PTSD, GAD

→ paroxetine

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- 3- premenstrual dysphoric disorder (sertraline)**
 - 4- impulse control disorder**
 - 5- hypochondriasis and body dysmorphic disorder (fluoxetine)**
 - 6- premature ejaculation (fluoxetine/sertraline)**
 - 7- autism and ADHD/obesity/eating disorder/migraine/IBS**

SSRI

✗ **SSRI have significantly fewer side effects than TCA & MAOI due to serotonin selectivity (they don't act on histamine, adrenergic, or muscarinic receptors).**

✗ **Side effects**

- ✗ Sexual dysfunction
- ✗ GI disturbance
- ✗ Akathesia (internal restlessness)
- ✗ Insomnia
- ✗ Headache
- ✗ Anorexia, weight loss
- ✗ In elderly: hyponatremia, prolonged bleeding time and cognitive impairment (conc.)
- ✗ Serotonin syndrome when used with MAOI (symptom: nausea, diarrhea, palpitations, chills, rigor, restlessness, confusion and lethargy)

Management of side effects:

- **For sexual dysfunction:**
maintain the drug and take Viagra OR switch to mirtazapine.
- **For GI upset: take the drug after a meal**
- **for akathisia: BDZ or B-blocker or anticholinergic**

× serotonin syndrome:

- 1- stop the drug
- 2- ABC
- 3- gastric lavage if overdose
- 4- IV fluid and NaHCO_3
- 5- BDZ (calm the pt, muscle relaxant and prevent seizure)
- 6- mirtazapine
- 7- B-blocker
- 8- ECT

TCA

- ✗ *Inhibit reuptake of norepinephrine & serotonin, increasing availability in the synapse.*
- ✗ Rarely used as first line due to:
 - ✗ Higher incidence of side effects,
 - ✗ Require more monitoring of dosing,
 - ✗ Can be lethal in overdose,
 - ✗ The most cardiotoxic anti-depressant. (avoid in elderly and children)
- ✗ Usually started on low dose, then increase to the therapeutic dose (that to avoid the anticholinergic side effects).

Uses of TCAs:

1. Depression
2. Anxiety disorder
OCD → clomipramine
PTSD → imipramine and doxepin
3. Pain syndrome
4. Nocturnal enuresis
5. Eating disorder
6. ADHD
7. Insomnia
8. Summarization
9. Compulsive behaviors in children

Examples of TCAs:

- **Imipramine** (activating so used in retarded MDD):
GAD, panic disorder, PTSD
- **Amitriptyline** (sedating so used in agitated MDD)
- **Trimipramine**
- **Nortriptyline**
- **Desipramine** (most epinephrine selective)
- **Clomipramine** : used in OCD because it is the most serotonin specific
- **Doxepin**: PTSD

× Side Effects

- + Anti-histamine properties (sedation)
 - + Anti-adrenergic properties (arrhythmias, tachycardia, orth-hypotension)
 - + Antimuscarinic effects (dry mouth, constipation, urinary retention, blurred vision)
 - + Weight gain
 - + Major complications 3Cs (Convulsion, Coma, Cardiotoxicity)
 - + Lethal in overdose
 - + The most one decreasing the threshold of seizure and the most cardiotoxic (causes sudden death in children and elderly).
- × Ci : glaucoma . Prostate hypertrophy ...in pregnant
bn36e

MAOI

- MOA: prevents the inactivation of biogenic amines as norepinephrine, serotonin, dopamine and tyramine.
- Drugs: phenelzine, tranylcypromine, isocarboxazid
- Uses: depression, panic disorder, PTSD, ASD

Side effects:

- Orthostatic hypotension, drowsiness, wt gain, sexual dysfunction, dry mouth, sleep dysfunction
- Serotonin syndrome if taken with SSRI
- Hypertensive crisis: when taken with tyramine rich food or sympathomimetics.

- Sever anxiety

Buspirone

- MOA: partial agonist on 5HT-1A receptor
- It has a slower onset of action than benzodiazepine
- Low potential for abuse
- Not given with SSRI: serotonin syndrome



□ Uses:

1 - useful in alcoholics

2- alternative to BDZ or venlafaxine for treating generalized anxiety disorder

B-blockers

- Useful for treating the autonomic effects of panic attacks or performance anxiety, as palpitations, sweating and tachycardia.
- It also can be used for treating akathisia (SE of typical antipsychotics)

miscellaneous

1 - Topiramate (topamax) : an anticonvulsant

- ▣ MOA: **blocks sodium channel**, enhance GABA and inhibit glutamate
- ▣ One of the new generation of mood stabilizers
- ▣ useful for treating the flashbacks and nightmares associated with PTSD

2- Venlafaxine (atypical antidepressant) useful in treating **generalized anxiety disorder, panic disorder and social anxiety**

- ▣ It is a SNRI, so increasing serotonin and norepinephrine availability in the synaptic cleft
- ▣ Main SE: increase the BP and stomach