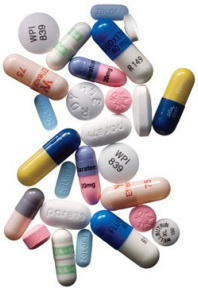
Newsletter of

THE PHYSICAL THERAPY CLINIC, INC.
Best Results, Least Visits.®

The COMPASS

Volume 10, Number 4 www.ptclinicjax.com **910-577-3355** June/July 2010

"Happy" Pills?



In the recent year, we have had more than a few patients express that they think they are "depressed" and want to see their doctor to get "happy pills." Apparently, drug manufacturers of SSRIs (Selective Serotonin Reuptake Inhibitors)have succeeded in their marketing goals. Unfortunately, many who get these medications are unaware of the brain-chemical changes and side effects that can occur with the use of SSRIs.

Due to the constant stress of military deployments, both servicepersons and their families in our community are being prescribed several drugs that can lead to abnormal Serotonin concentrations when taken in combination. Further, these young people do not always read the cautions provided with the medications and may take simple over-the-counter medications that also increase Serotonin activity such as cough medicines containing Dextromethorphan. The incidence of reported side effects and movement disorders like those seen in Serotonin Syndrome (SS) is also on the rise.

Serotonin syndrome can theoretically be the result of any drug or combination of drugs that has a net effect of increasing serotonergic neurotransmission (example: Paxil and Robitussin). It is thought to occur as a result of excess stimulation of the 5-hydroxytryptamine 1A (5-HT1A) receptor and possibly the 5-hydroxytryptamine 2 (5-HT2) receptor. SS can result from an excess of synaptic serotonin with the use of serotonergic agents alone OR in combination with other serotonin-enhancing drugs (see adjacent column).

The incidence of SS is unknown—-the variable and nonspecific nature of its presentation makes it difficult to diagnose, hence it is often underreported. When SS presents gradually, the side effects are often "treated" with more prescriptions (the patient commonly is seeing more than one prescribing provider) that can further increase serotonin levels in the brain. (True example: "I'm sleeping now but I'm tired all day and my sex drive is diminished. Can you give me something for that?" A Px for Buspar came first, then Provigil next. She was already on Concerta, Effexor, and Flexeril, Vicodin, Remeron, and Ambien).

The gradual onset of SS, rather than the typical acute onset, seems to be the challenge. Mason et al and Chechani also discussed pain as a symptom of SS. Some patients may experience mild symptoms for weeks before progressing to a more severe form of the syndrome. Therefore, many symptoms or signs can be overlooked. Example: nausea and vomiting, dizziness, headaches, fatigue, muscle aches and pains, insomnia, confusion and loss of memory can be present in many other illnesses. We have had a few patients then suddenly present with muscular tremors in paraspinal muscles and state, "my spasms are back!".

Physical therapists have an advantage in observing a patient closely (2-3 times per week for 30-60 minutes) and often see first-hand changes in patients that can be associated with medications or drug interactions. Increases in Serotonin can have musculoskeletal side effects as well. We need to be acutely aware of our patients' medications and be able to report the appearance of any unusual symptoms to the referring physician immediately.

Diagnostic Criteria for Serotonin Syndrome

Radomski et al revised the diagnostic criteria for SS:

1. Addition of serotonergic agent to an already established treatment(or increase in dosage) and manifestation of at least 4 major symptoms or 3 major symptoms plus 2 minor ones.

Mental (cognitive and behavioral) symptoms
Major symptoms: confusion, elevated mood, coma, semi-coma or semi-coma
Minor symptoms: agitation and nervousness, insomnia

Autonomic symptoms
Major symptoms: fever, hyperhidrosis
Minor Symptoms: tachycardia, tachypnea & dyspnea, diarrhea, low or high blood pressure

Neurological symptoms
Major symptoms: myoclonus, tremors, chills, rigidity, hyperreflexia
Minor symptoms: impared coordination, mydriasis, akathisia

2. These sxs must not correspond to a psychiatric disorder, or its aggravation, that occurred before the patient took the serotonergic agent.
3. Infections, metabolic, endocrine or toxic causes must be excluded.
4. A neuroleptic treatment must not have been introduced, nor its dose increased, before symptoms appeared.

Serotonin Enhancers

These include but aren't limited to:

- SSRIs such as citalopram (Celexa), fluoxetine (Prozac,Sarafem), fluvoxamine, paroxetine (Paxil) and sertraline (Zoloft)
- Serotonin and norepinephrine reuptake inhibitors (SNRIs) such as trazodone (Desyrel) and venlafaxine (Effexor)
- The norepinephrine and dopamine reuptake inhibitor (NDRI) buproprion (Wellbutrin, Zyban)
- Monoamine oxidase inhibitors (MAOIs) such as isocarboxazid (Marplan) and phenelzine (Nardil)
- Pain medications such as fentanyl (Sublimaze), meperidine (Demerol), pentazocine (Talwin) and tramadol (Ultram)
- Anti-nausea medications such as granisetron (Kytril), metoclopramide (Reglan) and ondansetron (Zofran)
- Anti-migraine medications such as almotriptan (Axert), naratriptan (Amerge), sumatriptan (Imitrex) and zolmitriptan (Zomig)
- Over-the-counter cough and cold medications containing dextromethorphan (Robitussin DM, Sudal DM)
- drugs such as Ecstasy, LSD and Syrian rue
- Herbal supplements such as St. John's wort and ginseng
- Lithium (Eskalith, Lithobid)

Leanne L. Burns, PT Brian C. Tantilla, PT Laurie A. Wilson, PT Melissa J. Willis, PT Candace D. Leggett, PT