CLASSES OF MEDICATION FOR DEPRESSION AND KEY COUNSELING POINTS

Release Date: 10/18/2011
Expiration Date: 10/18/2012

FACULTY:

Kathleen S. Allen, APMHCNS-BC, DNP

FACULTY AND ACCREDITOR DISCLOSURE STATEMENTS:

Faculty Name has no actual or potential conflict of interest in relation to this program.

ACCREDITATION STATEMENT:

Pharmacy
PharmCon Inc is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.
Program No.: 0798-0000-11-074-H04-P
Credits: 1 contact hour, 0.1 CEU

Nursing
Pharmaceutical Education Consultants, Inc. has been approved as a provider of continuing education for nurses by the Maryland Nurses Association which is accredited as an approver of continuing education in nursing by the American Nurses Credentialing Center’s Commission on Accreditation.
Program No.: N-699
Credits: 1 contact hour, 1.0 CEU
TARGET AUDIENCE:

This accredited program is targeted nurses and pharmacists practicing in hospital and community pharmacies. Estimated time to complete this monograph and posttest is 60 minutes.

DISCLAIMER:

PharmCon, Inc does not view the existence of relationships as an implication of bias or that the value of the material is decreased. The content of the activity was planned to be balanced and objective. Occasionally, authors may express opinions that represent their own viewpoint. Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this activity is not meant to serve as a guideline for patient or pharmacy management. Conclusions drawn by participants should be derived from objective analysis of scientific data presented from this monograph and other unrelated sources.

Program Overview:

To provide participants with an understanding of various depression medication classifications as well as counseling points for each of those groupings.

OBJECTIVES:

After completing this program, participants will be able to:

- Review the etiology of depression including current thinking about causes of depression
- Review how mental health providers assess patients in order to optimize the best chance of medication compliance
- Review the current treatments for depression, including non-pharmacological treatments
- Review the side effects of common anti-depressants in order to provide patients with this information
The role of pharmacists in the treatment of depression can be a key role. Pharmacists must understand not only the etiology of depression, but also the available treatment options. These treatment options include: standard doses, possible side effects, off-label uses of medications, medical emergencies, and educating patients and their families about common medications and treatments.

**DEPRESSION IS A MAJOR PUBLIC HEALTH CONCERN**

Major depression is among the most burdensome diseases, currently ranked as the fourth leading cause of illness burden worldwide (WHO; Murray and Lopez).

According to the National Institute of Mental Health (NIMH), mental health disorders are the leading cause of disability in the United States and Canada. Recently the World Health Organization reported that the lifetime prevalence of major depression in the United States is 16.2 percent. When broken down by gender, approximately 9 to 12% of men and 20 to 25% of women in the United States will experience clinical depression in his or her lifetime (Nemeroff; Greden).

Depression can strike at any time during childhood, adolescence, or adulthood; although onset is usually between 15 to 19 years of age (MHA). Depression occurs worldwide and affects people of all races, ethnicities, and socioeconomic groups. At-risk groups for depression include: women, those who have had a previous episode, and those who have had family members previously diagnosed with a mood disorder (Greden).

Suicide is the 11th cause of death in the United States affecting 30,000 people a year (NIMH). Risk factors for suicide include depression or other mental health illness. A dual diagnosis of substance abuse and mental illness often presents itself. According to Moscicki (2001) upwards of more than 90% of those who have completed suicide had these risk factors.

Clinical depression, known as Major Depressive Disorder (MDD), is a complex illness that seriously impairs an individual’s ability to function, causes personal and family anguish, interrupts careers, and costs employers and society billions of dollars each year. The U.S. Department of Health and Human Services recently released a report which identifies key health issues in the U.S. over the next decade. Better recognition and treatment of major depression is listed as one of the top 10 health care goals to improve the health of all Americans (“About Healthy”). This enormous public health problem is compounded by stigma and lack of knowledge of causes, symptoms and treatment even by health care professionals (Greden).
MDD results from an interplay of genetic, physiologic, and environmental stress factors (Plotsky, Owens and Nemeroff). Neuroscientific research has demonstrated that changes occur in neurotransmission, particularly with serotonin, norepinephrine and dopamine, as well as changes in neuroreceptors and subsequent intracellular signaling. Dysregulation of the hypothalamic pituitary adrenal (HPA) axis results in increased cortisol production which over time, appears to have negative effects, including reduction of hippocampal volume (Nestler and Salposky). Untreated, depression can affect the brain by causing a kindling or “prekindling” (Kendler) effect that predisposes the brain to respond more quickly to each depressive episode, with more intense responses and longer duration of symptoms. Subsequently, each depressive episode becomes harder to treat. Eventually the usual treatment modalities may fail.

While many people use the term “depression” to describe temporary sadness or discouragement, MDD is a serious illness manifesting at least five of the following symptoms over the same two week period: loss of pleasure in usually enjoyable activities (anhedonia), depressed mood, disturbance in sleep patterns, change in appetite, loss of energy or fatigue, hopelessness, recurrent thoughts of death or dying, significant (5% over a month) weight loss or gain, worthlessness or guilt, psychomotor agitation or retardation, and inability to think or concentrate or make decisions. None of the symptoms can be accounted for by a medical condition, delusions or hallucinations, substance abuse, or is caused by bereavement (unless it continues for more than two months). In addition, the symptoms cause a significant amount of distress in all areas of functioning (APA).

ASSESSMENT FOR DEPRESSION

Although many people may state that they are depressed or sad, it is important to distinguish between a mental health disorder and everyday stress or sadness. Life consists of ups and downs, but when those “downs” interfere with daily functioning of life, an assessment by a mental health provider is necessary.

A mental health provider will assess a patient for depression using a basic screening tool. There are several in use, which may include: the PHQ-9 developed for primary care clinicians, the GDS or Geriatric Depression Scale, the Hamilton Rating Scale, or other screening tools. Once the patient has been evaluated and has been found to have depression, the provider may offer a combination of treatment options. Medications are one option. Supportive or talk therapy, cognitive behavioral therapy, or other types of psychotherapy are also options that have been found to help those with depression, along with
medications (Derubeis). Other options may include herbal remedies such as St. John’s Wort, but not in conjunction with anti-depressant medications. St. John’s Wort increases the level of the neurotransmitter serotonin in the brain. Selective Serotonin Reuptake Inhibitors also increase the amount of serotonin in the brain. This combination can cause side effects that may include cardiac problems, increased anxiety and shivering (Medline Plus: St. John’s Wort).

Treatment resistant depression may be treated with Electroconvulsive Therapy (ECT). This type of therapy is done under general anesthesia. A seizure occurs when a small electrical current is given. Although the exact cause is unknown, it is believed that the neurochemistry in the brain is restored by this type of therapy. Other alternative therapies currently being studied for their effectiveness include Vagus (or Vagal) Nerve Stimulation (VNS) which is a treatment that uses electrical impulses to stimulate mood regulators in the brain. According to the University of Michigan website VNS is often described as the “pacemaker for the brain.” A device is implanted in the upper chest area and the wires are attached to the left vagus nerve. When the nerve is stimulated by an electrical pulse it helps to regulate mood (University of Michigan). Another option is Repetitive Transcranial Magnetic Stimulation (rTMS). This treatment uses a magnetic field to stimulate neurons in the brain. It is non-invasive and the patient usually receives the magnetic stimulation treatments for three to six weeks.

MEDICATIONS FOR DEPRESSION

Medications will be prescribed only after taking a patient’s history. This history will include other family members with a psychiatric illness and what medications worked for them (if any); onset of symptoms of depression (to distinguish between dysthymia and unipolar depression); suicide assessment; past trials of medications (if any); and allergies to medications.

Usually if a family member has responded well to a medication, it is the first medication tried. The Selective Serotonin Reuptake Inhibitors (SSRI’s) work well for first trial anti-depressants. These medications include fluoxetine (Prozac), citalopram (Celexa), escitalopram (Lexapro), sertraline (Zoloft), fluvoxamine (Luvox) and paroxetine (Paxil). These medications increase the levels of serotonin in the brain. SSRI’s have few side effects and patients usually tolerate them well. Common side effects include agitation, restlessness, diarrhea and nausea, insomnia, and headache. Some patients report sexual side effects on SSRI’s. A medical life-threatening emergency can occur with SSRI’s, especially if the patient is taking more than one but, can also occur by using high doses of one SSRI. This emergency is called Serotonin Syndrome and it causes increased serotonergic activity in the Central Nervous System. The symptoms develop within 24 hours. The symptoms of Serotonin Syndrome include a high fever, mental
status changes, and autonomic instability including vital sign abnormalities, clonus, deep tendon hyperreflexia, akathisia, and tremor. Typical vital sign abnormalities include tachycardia and hypertension, but severe cases may develop hyperthermia and rapid, dramatic swings in pulse and blood pressure. Pertinent physical examination findings include: hyperthermia, agitation, clonus, tremor, akathisia, deep tendon hyperreflexia, dilated pupils, dry membranes, hyperactive bowel sounds, diaphoresis, and flushed skin. Discontinuation of the SSRI will usually resolve symptoms within 24 hours but may take two or more weeks. Treatment is supportive.

Other medications for depression include SNRI’s, or Serotonin Norepinephrine Reuptake Inhibitors. These medications include venlafaxine (Effexor) and duloxetine (Cymbalta). These medications target different receptors in the brain. Venlafaxine (Effexor) targets norepinephrine along with serotonin and duloxetine (Cymbalta) targets these same receptors (Medline Plus: Drugs & Supplements). Side effects include a rise in blood pressure, nausea, feeling sedated, constipation, and insomnia. Both of these medications should be tapered slowly to avoid discontinuation syndrome, which is when the patient develops chills and flu-like symptoms, or, some patients report “electric zaps” if taken off too rapidly. Other medications used for depression are mirtazapine (Remeron) which helps to increase serotonin levels in the brain. This medication is also used as an anti-anxiety medication and insomnia. For this reason, it is usually given at bedtime; it is especially effective in the lower doses as a sedative agent. It also causes increased appetite, dry mouth and weight gain. Mirtazapine can be given to the frail elderly to help increase their appetite.

Another medication is bupropion (Wellbutrin); this medication does not affect the serotonin levels in the brain. It does have a stimulating effect which can be useful for patients with fatigue. One of the side effects can be a lowering of the seizure threshold, so it is not recommended for those patients with eating disorders. It has been used for individuals who want to quit smoking and has been marketed as Zyban. Another class of medications are the tricyclic anti-depressants. Drugs in this class include nortriptyline (Pamelor), amitriptyline (Elavil), imipramine (Tofranil), desipramine (Norpramin and clomipramine (Anafranil). These medications do have more side effects which include blurred vision, memory impairment, confusion, and hallucinations, especially in the elderly. Tricyclics can cause a sudden cardiac event which can result in death. Ray et al (2004) found that in doses less than 100mg, tricycles had a lower risk of sudden cardiac death. Their study showed that those who were prescribed tricyclics had a dose-related increase in the risk of sudden cardiac death with the risk being 2.53 greater than those not on tricyclics (in particular amitriptyline (Elavil)). These medications need to be tapered slowly in order to avoid discontinuation syndrome.
Monoamine oxidase inhibitors (MAOI) are the oldest anti-depressant group. These drugs block enzymes that break down the neurochemicals such as serotonin, norepinephrine and dopamine in the brain. These neurotransmitters are destroyed by a protein called a monoamine oxidase. MAOI’s block the protein from destroying these mood enhancing neurotransmitters so depressive symptoms will be lessened. Medications in this class include tranylcypromine (Parnate) and phenelzine (Nardil). These medications are typically used when other anti-depressants have not been successful. Although there is dietary monitoring that needs to be followed in order to avoid a hypertensive crisis if tyramine, which is an amino acid that can help to regulate blood pressure in the body is eaten. Tyramine is found in certain foods and can cause a sudden increase in blood pressure which could lead to a stroke (Mayo Clinic). Foods to avoid are Chinese foods, aged cheeses, processed meats, some wines, avocados, bananas, aged meats or fish. Some medications can also increase your blood pressure and these should be avoided if a patient is taking a MAOI. These include other antidepressants, some decongestants, some pain medications and herbal supplements such as St. John’s Wort. Side effects of MAOI’s may include dizziness, GI upset, urinary retention, headache, and fatigue and muscle contractions.
Works Cited


