DEPRESSION IN BRAIN INJURY

by Daniel Gardner, M.D.

Secluding himself in the bedroom, darkened to match his gloomy mood, seventeen year old brain injury survivor John stared blankly at the television. His thoughts turning inward, John sighed heavily under the weight of deep, unremitting despair. Shortly after returning home from the hospital, his buddies quit visiting. And hopes of attracting girls were dashed by the confused, suspicious, frightened, and wary reactions of others to his slowed speech and awkward gait.

Fifty year old brain injury survivor Mary lamented about the tremendous effort required to appear bright, cheerful, and engaging with coworkers and family, while privately struggling to fend off an enveloping shroud of bleakness and self doubt. Plagued with guilt, self-recrimination, and sorrow, forty five year old brain injury survivor Rick discussed his inability to provide financially for his wife and children. And he felt ashamed and inadequate that he could no longer sexually satisfy his wife.

Dealing with depression that results from the neurological and psychological consequences of brain injury is one of the greatest challenges facing survivors, their families, and health care providers. Depression occurs in fifteen to twenty-five percent of brain injury survivors. It may manifest itself as sadness and low mood, but can often present as agitation, irritability, lack of enjoyment, or impaired cognition.

As I have mentioned in previous articles in this newsletter, a comprehensive biological/psychological/social approach to evaluation and treatment yields the best results. I believe that if the necessary resources are available, each of the brain injury survivors described above would benefit from psychotherapy and adjustment in social milieu.

Psychotherapy could address the methods in which the survivors cope with intense feelings of disappointment, frustration, anger, guilt, shame, etc. Survivors and family members could find more adaptive ways to deal with these painful feelings, maintain a sense of self-worth, and derive satisfaction from life. Through the process of therapy they could understand how their current condition often resonates with and revives intense, painful feelings from earlier life situations which are unconsciously experienced as similar.

Attention to social, avocational, and occupational relationships is equally as important. Common sense tells us that a depressed brain injury survivor will fare better in the supportive, educational and social milieu of a rehabilitation program than isolated at home.

However, we are all aware that the majority of brain injury survivors lack sufficient resources to obtain the optimal treatments. In addition, due to cognitive and behavioral deficits, psychotherapy and social interventions may be ineffective - at least without the addition of medication. And this is often the case with depression in brain injury survivors. In my experience, a combination of antidepressant medication, psychological therapy, and environmental interventions is most helpful. Now let's focus on particular antidepressant medications for use in traumatic brain injury. In the last 1-2 years I've been inclined to recommend a trial of the more newly available, serotonin reuptake inhibitor antidepressants, including fluoxetine (Prozac), sertraline (Zoloft), and paroxetine (Paxil). They all have a low incidence of side effects (which often resolve upon lowering the dose) and seem highly effective in relieving depression, anxiety, and lethargy. I have noticed however, that these medications are more likely to cause increased agitation in those brain injured persons with more severe cognitive and physical impairments. Also, as mentioned in my article on Prozac (3/93 issue of HIP), Prozac and the other two medications may be effective in relieving obsessive-compulsive symptoms and inappropriate sexual behaviors.

If the serotonin reuptake inhibitors are poorly tolerated or ineffective, I often recommend a trial of nortriptyline (Pamelor). While very effective, this medication has more potential side effects,

e.g., dry mouth, constipation, dizziness on position change, and rapid heart beat. One distinct advantage is the existence of a "therapeutic window" in blood levels of nortriptyline. This means that we can adjust the dose by measuring blood levels to bring it into the therapeutic range and that when in that range, nortriptyline should relieve the depression. If it has not done so, another medication should either be added to or substituted for the nortriptyline.

Other antidepressant medications which I have found effective include trazodone (Desyrel), desipramine (Norpramine), bupropion (Wellbutrin), and amoxapine (Asendin). I also have had some good results with selegiline (Deprenyl), the anti-Parkinson medication which happens to be a monoamine oxidase inhibitor (MAOI) antidepressant as well. Selegiline may be particularly useful in depressions accompanied by lack of initiation and slowed movements. The psychostimulants also may help relieve the symptoms of depression. These medications include methylphenidate (Ritalin), dextroamphetamine (Dexedrine), and magnesium pemolate (Cylert).

Apart from selegiline (Deprenyl), up to this time I have recommended no other MAOI antidepressants for brain injury survivors due to some risk of high blood pressure episodes if foods with a high content of the amino acid tyramine (e.g., chocolate, beer, red wines, some cheeses) are consumed. Therefore, a person must be capable of adhering to a low-tyramine diet when taking these medications. However, unlike other MAOI's, selegiline taken at low doses requires no dietary restriction. I do see the potential usefulness of the MAOI antidepressant phenylzine (Nardil) in survivors with depression and headaches, since a recent report indicates its effectiveness for chronic headaches.

In some intractable, "treatment- resistant" depressions, combinations of medications work well. Among these are fluoxetine + another antidepressant (e.g., nortriptyline, desipramine, trazodone); fluoxetine + thyroid hormone (T3 or T4); fluoxetine + buspirone (Buspar, an antianxiety medication); and an antidepressant + lithium carbonate +/or an anticonvulsant such as carbamazepine (Tegretol) or valproic acid (Depakote).

Clinical experience demonstrates that a number of helpful antidepressant medications are available to relieve the suffering of depression after brain injury. And researchers in depression are currently very actively developing newer, more effective antidepressants. While medications are clearly not the total solution to any problem, they can be an important intervention in our efforts to reduce distressing symptoms and improve functioning in brain injury survivors.

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