Co-Morbidities and Dementia

Guest Editor’s Message ........................................................................................................2
By Karen Knutson, MSN, MBA

Dementia, Diabetes, Hypertension, and Alcohol Abuse: A Case Study of Medical Co-morbidities .................................................................3
By Karen Knutson, MSN, MBA

Alzheimer’s Disease Co-morbidities ..................................................................................7
By M. Reza Bolouri, M.D.

Frontal Lobe Disorders and Dementia .............................................................................9
By Patricia Gross, Ph.D., ABPP-CN

A Different Dementia: Different Challenges ..................................................................13
By Sharon Mayfield, BSN
Care managers play a pivotal role in coordinating the care of their clients. As people live longer, the complexity of life will continue and the increasing prevalence of chronic disease will pose many challenges for coordinating such complex care.

In health care, co-morbidity is defined in two different ways. The first defines a medical condition existing simultaneously but independently with another condition. The second defines a medical condition that causes, is caused by, or is related to another condition. In reviewing the literature the first definition is the standard and the second definition is newer than the standard and less well accepted. In psychiatry, psychology, and mental health counseling, co-morbidity refers to the presence of more than one diagnosis at the same time. However, in psychiatric classification, co-morbidity does not necessarily imply the presence of multiple diseases, but rather an inability of a single diagnosis to account for all of the individual’s symptoms.

While the experts hash out definitions of co-morbidity there is a great need for public policy to acknowledge and address the increasing complexity of individuals living longer in our society and the challenges these co-morbidities represent.

This issue of the Geriatric Care Management Journal highlights dementia and co-morbidities. What is it that we do as care managers that is especially important? How do we sort out the co-morbidities when more than one chronic illness is present? What are the most effective assessment, treatment, and care options available for our clients? Selected articles have been chosen to provide more understanding of the co-morbidities associated with dementia. Hopefully you will find new insights and approaches to integrate into your practice.

The first article which I authored, “Dementia, Diabetes, Hypertension, and Alcohol Abuse: A Case Study of Medical Co-morbidities” uses a case study that describes the relationship of the client’s dementia and diabetes, hypertension, and alcohol abuse. Integrating the client’s history, observation, and functional assessment instruments help to develop a plan of care. The article demonstrates how care managers can incorporate their knowledge of dementia and co-morbidities to improve both client and family outcomes.

continued on page 3
The second article “Alzheimer’s disease co-morbidities” by Reza Bolouri describes the psychiatric co-morbidities of depression, anxiety, psychosis, agitation, and aggression as well as the often-overlooked personality disorder. Symptom management, environmental modifications, and medication therapies are explored as the author describes a comprehensive approach to managing co-morbidities.

In her article, “Frontal Lobe Disorders and Dementia,” Patricia Gross describes the lesser understood medial frontal syndrome, frontal convexity syndrome, and orbital frontal syndrome and provides case examples and treatment options. She demonstrates how neuropsychological evaluation can be an important tool to help the care manager determine the client’s cognitive strengths and weaknesses and how to best intervene.

Sharon Mayfield has written a first-hand account of her work with clients experiencing frontotemporal lobe disorders and the lessons she has learned while assisting families in their caregiving roles. She describes different symptoms, caregiving approaches, and explores successful strategies that family caregivers can use. Case examples illustrate how the care manager can help.

References


Dementia, Diabetes, Hypertension and Alcohol Abuse: A Case Study of Medical Co-morbidities

By Karen Knutson, MSN, MBA

Michael B, a 63-year-old single retired business executive with dementia, diabetes, hypertension, and a history of alcohol abuse, living in Charlotte, North Carolina, was referred for care management services by a friend. Michael’s older brother Eric, a retired attorney, lives in Hawaii and had not seen Michael in two years. Michael’s younger sister Linda, a teacher and Michael’s health care POA, lives in California and had not seen Michael in two years. Michael’s friends and family reported to the care manager as she interviewed them that they were experiencing difficulty in their relationships with one another as they tried to help him.

Early in 2009 Michael participated in a residential treatment program for two months, but was drinking again within 48 hours of returning home. He went to a second residential treatment program for 3 months, came back home, began drinking again, and after an incident at work was forced to resign in January of 2010. Michael finally allowed the care manager into his house on her fourth visit to the house. He had a lovely home full of artwork and sculpture that he had collected over the years. The care manager found him overwhelmed during the course of two visits to complete the evaluation because, as he said, “my house is out of control, and I can’t seem to maintain it.”

Newspapers, mail, catalogs, dirty dishes, glasses, and garbage were on the floor of every room on the lower level. The food in the refrigerator was spoiled, and the freezer was a block of ice. The sink was stopped up, and the kitchen was bug infested. Specific prescriptions ordered were never filled and others including his insulin had not been reordered in the past four months. He was not taking his medications, and he was not testing his blood sugar. The care manager checked his blood sugar and it was 543, which was a seriously high level. He had lost his credit cards, calendar, and wallet and was unaware of his financial spending. He had accrued $25,000 in debt on one credit card that he thought he had paid off. He also looked at a bill for the purchase of art and couldn’t remember what he purchased or why. His cable was cut off because of an unpaid balance.

Sorting out the relationships between dementia and other chronic

continued on page 4
illnesses can be difficult. A clearer understanding of the client’s medical co-morbidities can help the care manager develop a more comprehensive understanding and approach to care planning.

Relationship of dementia and diabetes

Rates of dementia are higher in people with diabetes than in those without. The strongest effect has been noted in vascular dementia; however, there is an association with Alzheimer’s disease as well. Impaired fasting glucose levels are approximately twice as common in people with Alzheimer’s disease and diabetes than with diabetes alone. One study found that a 1% rise in A1c (i.e.: from 6.0% to 7.0%) was associated with a significant decline in scores on three different tests of mental functioning. The risk of dementia goes up significantly if clients maintain an A1c in the 8% range. The micro-vascular changes in diabetes are greatly underrated as a brain disorder, and the author of one research article even suggested we consider Alzheimer’s disease “type 3 diabetes.”

Relationship of dementia and hypertension

Studies have found that high blood pressure in middle age is associated with increased risk of dementia later in life. One study found that successful hypertension control reduced the risk of dementia. The same triggers for heart disease – high blood pressure, obesity, and diabetes seem to increase the risk of dementia too. Historically, the association was with “vascular dementia” where memory problems were linked to small strokes. New studies recognize a mix of two dementias. Blood pressure readings of 140 over 90 or higher can also seem to spur Alzheimer’s disease-like processes. The clinical approach at present is to maintain as low a blood pressure as possible to prevent dementia as well as stroke. There are no other potentially effective therapies.

Relationship of dementia and alcoholism

Most studies have indicated that excessive alcohol consumption leads to cognitive impairment but the pathological mechanism remains unknown. A common theme in the literature was that most patients of alcohol abuse are in denial. One study compared the cognitive impairment of alcohol-dependent patients to the cognitive impairment of patients with Alzheimer’s disease. In that study all domains of cognition were impacted to the same degree. After an extensive Medline search of dementia and alcoholism, the author was unable to find any studies indicating that cognitive impairment leads to excessive alcohol consumption. Because alcohol is a toxin that is especially harmful to the liver, elevated liver enzymes are the bio-markers for excessive alcohol consumption. An elevation of the liver enzymes, aspartate aminotransferase (AST) and/or alanine aminotransferase (ALT) occur when liver cells are damaged or destroyed. Liver disease is the most likely diagnosis if the AST level is more than twice that of ALT.

Integrating Observation and Functional Assessment Instruments

The care manager used the Folstein Mini-Mental State Exam (MMSE) to evaluate Michael’s cognitive functioning on the first visit. He received a score of 26 out of 30. He was experiencing difficulty with orientation, short-term recall, and was not fully oriented to his environment. However, he had good attention/calculation skills and good language skills. While his long-term memory was good, he had significant difficulty with short-term memory and could not always remember what had just happened. His difficulties with activities of daily living (forgetting to take his medication, fill and reorder prescriptions) were due in part to his inabil-
ity to recall recent experiences and required prompting and assistance by another person.

While the Folstein (MMSE) serves as a good, first-line general screening tool and takes only 10 minutes to administer, it does have its limitations since it focuses on a selection of concrete thinking skills and does not test the executive function skills of organizing, planning, judgment, problem-solving, insight, and reasoning (See Figure 1: Executive Function). These are crucial abilities, as they help Michael make decisions in regards to personal care, health care, financial, and legal matters. Impairment of these skills increases the risk that he will make serious mistakes or even be exploited by others. It was the impression of the care manager that Michael was experiencing difficulty with executive function and was at risk for undue influence.

The Clock Drawing Test reflected difficulties with frontal and temporal-parietal functioning and took the care manager a couple of minutes to administer. The Geriatric Depression Scale evaluated Michael B’s emotional functioning and took less than 10 minutes to administer. He received a score of 7 out of 15 suggesting clinical depression at the time of the assessment.

**Services and Interventions**

In addition to care management and referral to dementia specialists, other interventions have been shown to improve care for clients. These include companion/caregiver services, support and education for family caregivers, and medication interventions such as client reminders and refilling prescriptions. Other medication considerations influencing outcomes include drug therapy complexity (more than one drug or more than one dose a day) and medication management for clients having difficulty remembering to take their medications.

Returning to the client in the case study, the care manager spoke to Michael’s sister and brother about setting up caregiver services immediately for 12 hours per day, 7 days a week in addition to ongoing medication management by an RN care manager on a weekly basis. Michael also needed assistance with financial management and possible transportation. The next step was to recommend a neurologist who specialized in dementia for a dementia work up to rule out a variety of treatable medical conditions that can cause memory impairment, determine a diagnosis, and review Michael’s current medications.

The care manager was able to get the client worked into the neurologist’s schedule the following week, drove the client to the appointment and participated in the appointment, sharing her Folstein (MMSE), Clock Drawing and Geriatric Depression Scale results. The neurologist then used the Montreal Cognitive Assessment (MoCA) designed as a screening instrument for mild cognitive dysfunction. The tool assesses different cognitive domains including attention and concentration, executive functions, memory, language, visuoconstructional skills, conceptual thinking, calculations, and orientation. A score of 26 or above out of 30 is considered normal. It took the neurologist approximately 10 minutes to administer the MoCA. Michael received a score of 22 out of 30. Routine blood work and a PET scan were ordered as well as an EEG. The neurologist told Michael that whatever was going on with his brain, his drinking was accelerating it. He suggested an in-home detox program as Michael refused to go through a hospital based program, and prescribed Ativan 5 mg three times a day on a tapering schedule while he quit drinking alcohol. He also recommended that he stop driving.

On the second visit the neurologist reviewed the lab results including thyroid function, folic acid, and B12 levels, which were normal. After reviewing 12 have short-term memory difficulty but difficulty with decision-making and judgment. This included misjudgments about alcohol and no recollection after consumption, which was why he needed 12 hours of supervision a day at this point. At this point Michael B was no longer drinking, was losing weight, and his blood pressure was under control. The neurologist also prescribed the antidepressant, Effexor, 75 mg, once a day to treat his depression.

---

**FIGURE 2: Frontal and Temporal Atrophy on PET Scan**

<table>
<thead>
<tr>
<th>Behavioral disinhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addictive behavior</td>
</tr>
<tr>
<td>Apathy and loss of sympathy and empathy</td>
</tr>
<tr>
<td>Perseverative or compulsive behavior</td>
</tr>
<tr>
<td>Excessive eating and drinking</td>
</tr>
</tbody>
</table>

**FIGURE 3: Client Goals and Strategies**

| GOALS: Avoiding alcohol and major shopping purchases (art, sculpture, antiques) |
| Managing client’s average blood sugars and blood pressure to decrease risk of cognitive decline |
| Keeping client active: walking, water aerobics, swimming, classes at the Senior Center |
| A sense of purpose: meaningful activities and nurturing relationships |

| STRATEGIES: Ordering 2 waters and 2 diet cokes at lunch as soon as the waitress/waiter comes to the table. Then focus on the menu and let client order both lunches. Say no to antique shopping, going to the bank and the ABC store but suggest other options. Distract him away from things that can harm him financially and physically. |

---

*continued on page 6*
The care manager then took Michael to his primary care MD visit. His physician wanted to tighten up the control on his diabetes now that he had a supportive team in place to help him. He wrote new orders for insulin and requested that the care manager fax him the blood sugar results weekly. They then met with Michael’s friend and financial POA as well as his attorney, activating the health care and financial powers of attorney and setting up a cash management system so the care manager could take cash out on a weekly basis for household expenses. The care manager then set up a training program for the caregivers working with Michael with customized goals and strategies to better help them work with him (See Figure 3: Client Goals and Strategies).

Discussion

A clinically questioning approach by the care manager is essential. Communicating with all family members, friends, and health care professionals and asking questions and more questions until all possible information is gathered is desired. When more than one chronic illness is present, care managers need to get the help of appropriate medical specialists who specialize in dementia care. Learning about the relationships with the other chronic illnesses, the stage of those illnesses, the unmanaged and uncontrolled symptoms, pharmacotherapy, functional limitations, family dynamics, and need for care coordination all help to frame the picture of what is going on with the client.

It is usually assumed when a client is an alcoholic and has dementia that it is the effect of alcohol abuse that causes the dementia. In this case study, the client’s dementia (memory and frontal functions) contributed to his behavior of alcohol abuse. While we may never fully know the impact of medical co-morbidities on Michael’s current cognitive functioning, he did deserve a rigorous neurological evaluation to determine the cause(s) of the dementia and its relationship to alcohol abuse. An in-home detox program was set up and the client had a successful outcome. With the supports in place he no longer drinks alcohol, his blood pressure is consistently below 120/80, his most recent blood sugar was 119, his AST went from 258 (normal: 0-49 IU/L) in October 2010 to 31 in April 2011, and his ALT (normal: 0-55 IU/L) went from 118 in October 2010 to 39 in April 2011.

The discussion of the client’s psychosocial needs is outside the scope of this article. However, addressing psychosocial as well as medical needs using an integrated team of nurse and social work care managers increases the effectiveness of care management. A holistic team approach to addressing all of the client’s needs is critical.

The discussion of emotional burden of family caregivers is outside the scope of this article. However, an entire article could be devoted to this topic. By helping this client the care manager was able to decrease the caregiving burden and improve the quality of life of his friends as well as his two family members who were both working full time and living at a distance.

Conclusion

This article is based on a specific case study, while providing an overview on the relationship of dementia and select medical co-morbidities. Strategies and goals are suggested to reduce excess dementia in a specific client with the medical co-morbidities of diabetes, hypertension, and alcohol abuse. Providing care management for clients with dementia and medical co-morbidities can be of major benefit as it includes the complex, integrated daily care that the client and family require on a long-term basis. It can also be very rewarding for the care manager, as it provides an opportunity to demonstrate how we can make a difference. Care managers can incorporate their knowledge of dementia and co-morbidities to manage these clients and provide care that can improve both client and family outcomes.

* The client’s name and identity have been changed to provide confidentiality.

References


Struble L and Sullivan B. Cognitive Health in Older Adults. The Nurse Practitioner. 2011, April: 25-34.

Karen Knutson was the president and founder of OpenCare, the first private geriatric care management company in the Charlotte area. She is currently the Professional Development Specialist of SeniorBridge, providing care management and licensed home care services in Charlotte, North Carolina. Karen has her master’s in nursing, specializing in older adults and a master’s in business administration. She is the past president of the National Association of Professional Geriatric Care Managers and the current Editor-in Chief of the Geriatric Care Management Journal.
Alzheimer’s Disease Co-morbidities

By M. Reza Bolouri, M.D.

Alzheimer’s disease is a chronic, progressive neurodegenerative brain disorder that affects a patient’s memory, language, judgment, decision-making, planning, and organizing.

Alzheimer’s disease (AD) remains the most common cause of dementia. There are currently 5.3 million Americans affected by the disease, and as the aging population increases without a disease-modifying treatment, it is projected to be 15 million by 2050.

AD is a complex disease; hence, the treatment can at times be complicated and often challenging to the treating physicians. Successful treatment of patients with AD requires a thorough understanding of the patient and the family dynamic. AD, like any other chronic condition, may have other medical and psychiatric co-morbidities that need to be addressed. Treating the AD with anti-dementia drugs is a small part of the comprehensive management of AD. The discussion of medical co-morbidities are beyond the scope of this article; however, the psychiatric co-morbidities such as depression, anxiety, delusions, hallucinations, agitation, and aggression will be discussed. Some patients may have an undiagnosed personality disorder that resurfaces as the patient’s ability to compensate diminishes.

The physicians who treat patients with AD need to keep in mind that the management of this disease is more than just memory mediation. Even among the patients with AD, the presentation and the course of the disease varies. Therefore, the successful management of AD requires a comprehensive approach not only to the memory but also the co-morbidities. Care managers provide an invaluable resource to both the development of a comprehensive approach but also an ongoing plan to support the individual with AD and its co-morbidities.

Depression

Depression affects 20% to 32% of patients with dementia, though more prevalent in vascular dementia as compared to AD. The diagnosis and treatment of depression in patients with dementia is quite challenging as it can be an early manifestation of dementia or cause of the dementia called pseudo-dementia. The depression can fluctuate and the presentation may vary, such as difficulty with attention and focusing, apathy, anxiety, and agitation as opposed to feelings of guilt, insomnia, hypersonnia, or suicidality. There may also exist an undiagnosed bipolar depression that needs attention, as the treatment is somewhat different. There are several scales to assess depression in patients with dementia, such as Geriatric depression scale, Hamilton depression, and Cornell scale for depression. The treatment of depression in dementia includes pharmacotherapy and psychosocial modalities, although ECT has been used for severe cases. The SSRIs remain the mainstay of treatments and have a better safety profile, as these patients are prone to medication side effects. In the case of bipolar depression, treatment with mood stabilizers may improve the patient’s mood. This may be one of the reasons that Depakote has been effective in treating some patients with dementia. Psychosocial stimulation, such as supportive therapy, focusing on positive aspects of life, happy memories, enjoyable experiences, and previous accomplishments, is an effective non-pharmacological approach to depression.

Anxiety

Anxiety affects 20% of patients with dementia. In the initial stages of the disease, the fear of losing control. Generalized anxiety disorder occurs in 5% of patients with AD. As the disease progresses, the anxiety level can fluctuate depending on the living situation and the patient’s support structure. Patients may present with restlessness, irritability, fatigue, and sleep disturbance. Anxiety like depression can be measured using standard scales such as Worry scale, which is a self-report in mild dementia, and Rating Anxiety in Dementia relies on all available data to rate the anxiety. This includes the caregiver report and patient observation. Treatment of anxiety includes social intervention such as milieu therapy, addressing the patient’s specific stressors or environmental factors, and pharmacotherapy, although this approach needs to be addressed with extreme caution as patients with dementia are sensitive to tranquilizers. The initial approach should be a trial of SSRI antidepressants, as most drugs in this class also treat anxiety successfully. In generalized anxiety disorders, Buspirone can also be helpful.

Psychosis

Delusions and hallucinations have been present in 15% to 20% of patients with dementia and increase with the disease progression. Hospital-induced psychosis, such as delirium during a hospital stay secondary to a urinary tract infection or pneumonia, continued on page 8
Alzheimer's Disease Co-morbidities

continued from page 7

could be the first manifestation of dementia in an elderly population. The delusions are usually persecutory and misidentification as part of the triad, the agnosia seen in patients with AD. Paranoid delusion of intruders and missing personal possessions are common. Some patients do not recognize family members or their own home, and some report seeing dead relatives, animals, and children in the house as part of visual hallucinations. The psychotic symptoms are often accompanied by agitation and aggressive behavior. The psychosis is often elicited from the patient or caregiver and by the use of scales such as BEHAVE-AD, dementia psychosis scale, or NPI (Neuropsychiatric Interview). The treatment of psychosis in dementia is quite challenging as the new data reports increased risk of cardiovascular-related death in elderly patients with dementia. As long as the psychosis is not disruptive to the patient and family, it does not have to be treated. Behavioral and environmental interventions, such as avoiding confrontation and argument, gentle touching, and environmental modifications are the first line therapy and should be employed in combination with psychopharmacological therapy. This requires a tremendous patience on the part of the caregiver, as it tends to occur quite frequently.

In the cases where some form of antipsychotic treatment must be used for patient and family safety, the newer antipsychotic drugs such as Abilify, Seroquel, Zyprexa, Geodon or Risperdal are recommended. These drugs have a better side effect profile on extra pyramidal symptoms such as Parkinsonism, sedation, anticholinergic side effects, and orthostatic hypotension and tardive dyskinesia. Older antipsychotic drugs such as Haldol and Thorazine should be avoided at all costs. The patients and their families should be informed of the black box warnings related antipsychotic drugs. It is also important to recognize depression-induced psychosis, which may improve by treating the patients with antidepressants such as SSRIs. Bipolar depression can also present with psychosis during manic episodes. As mentioned earlier, psychosis could be a manifestation of an underlying medical condition that needs a thorough investigation.

Agitation and Aggression

Among patients with dementia, 27% exhibit agitation and/or aggressive behavior. There are two categories of agitation/aggression in dementia: one with psychosis, such as delusions and hallucination, and the other without psychosis. Agitation/aggression should be thoroughly investigated as it can signal an underlying medical condition or a patient need that cannot be properly communicated, such as hunger, thirst, pain, or a need for toileting. It can also be secondary to the underlying dementia, depression, or anxiety. These symptoms are particularly important, as it can be a concern for patient and/or caregiver safety. Patients with severe agitation are often angry with others, especially with the caregiver. They often resist help, such as shower, getting dressed, or toileting. Patients with dementia often get agitated in a new environment such as hospital or a new facility, or with new caregivers, or due to drug side effects. For example, certain tranquilizers and anticholinergic drugs that are used for bladder control can cause agitation in these patients. So the cause should be sought and addressed first. The environmental modification and supportive therapy is the mainstay of the treatment. Physical restraints should be the last resort only in cases where the patient is a danger to himself or others. The medications such as antidepressants, mood stabilizes, and if needed, antipsychotics can be used, again with special attention to the potential side effects.

One important psychiatric co-morbidity that is often overlooked by physicians caring for patients with dementia is undiagnosed personality disorder that can explain many of the behavioral disturbances that accompany a difficult patient. The patients with personality disorder pose a real challenge to the treating physician, as the patients are not aware of their illness. Unfortunately the diagnosis of this co-morbidity is quite difficult and the treatment almost impossible. Caregivers, as part of a care management team, may help in the ongoing assessment of these behaviors and be utilized to intervene with both behavioral restructuring and maintenance of a pharmacotherapy program as prescribed.

Conclusion

The psychiatric co-morbidities in patients with AD could be either part of the dementia or an undiagnosed condition. In either case, it is the second most important issue that needs to be addressed and treated. It is important to keep in mind that the treatment of dementia is not just memory treatment that has been the main focus of dementia treatment. The successful management of patients with dementia in general and Alzheimer’s dementia in particular is treating all symptoms of disease. Once the assessment is completed and AD is confirmed, an ongoing care plan may be developed, supervised, and modified, as appropriate, using the services of care managers working in conjunction with clients, family members, and other members of the larger care team.

Dr. M. Reza Bolouri is board certified by the American Board of Psychiatry and Neurology and founder of the Alzheimer’s Memory Center, combining the practice of general and behavioral neurology with innovative research and new drug development with emphasis in neurodegenerative brain disorders. He is a member of the American Academy of Neurology and served on the Western Carolina Alzheimer’s Association Board from 2007 to the present. Dr. Bolouri has taken a leadership role in serving the local geriatric community and people with dementia and has published numerous professional articles.
Frontal Lobe Disorders and Dementia*

By Patricia Gross, Ph.D., ABPP-CN

When assessing individuals for dementia a number of potential co-morbid processes must be kept in mind. One of the lesser understood areas of neurobehavioral dysfunction is that of the frontal lobe disorders. Strictly speaking, these disorders do not constitute a dementia, as memory skills, simple mathematics abilities, and visuospatial skills are typically intact. IQ scores can be normal. However, functionally these patients can display declines in activities of daily living (ADLs) and instrumental activities of daily living (IADLs) the equivalent of various forms of dementia. There are three such syndromes: the medial frontal disorder characterized by akinesia, the frontal convexity disorder characterized by apathy, and the orbital frontal disorder characterized by disinhibition. It is not common to find one of these disorders in isolation. Neurologic insults typically affect broad areas of the brain; often a person will present with a combination of these conditions. In this paper, case examples that illustrate these syndromes in isolation and treatment implications of the disorders will be discussed.

Medial Frontal Syndrome

The medial frontal disorder is more rarely seen because it involves a more protected area of the brain: the medial surfaces of the cingulate gyri, or the medial basal region inferior and anterior to the third ventricle. It is most often caused by a focal infarct in the area of the anterior cerebral artery or a tumor growing in the area. In the acute phase, akinetic muteness can result from transcortical motor aphasia. In this condition, there is little spontaneous verbal output, though repetition of language may be preserved. This appears to be a time-limited expression of the acute stage. The cognitive abulia, or slowed processing, can be a long-standing effect of the syndrome.

The akinesia associated with this syndrome leads to almost no spontaneous movement. Because of the position of the brain insult, lower extremity weakness and loss of leg sensation with resulting gait disturbance can occur. Incontinence can result with bilateral medial frontal lesions. If caused by an infarct, the condition may stay static or resolve over a period of days to months. The medial frontal lobe syndrome can easily be mistaken for the “waxy flexibility” of catatonia or severe depression, as the following case illustrates.

Case Example: Hector Morales was a retired 63-year-old man who lived with his sister’s family his whole life. He had a 6th grade education, had been a janitor, and had never married or had children. He was fairly reclusive but would participate in activities with his sister and her family. He had no psychiatric or medical history, and was on no medications. One Sunday, he fell downstairs after attending church with his family. Although somewhat dazed at first, Mr. Morales claimed to feel fine and refused to be taken to an E.D. In the following days, Mr. Morales became progressively reclusive.

His affect was markedly flat and his voice quality when he did speak was monotone, aposodic, with very low voice volume. On the unit, he failed to answer most questions, just staring at the examiner. He occasionally voiced soft repeated “no’s. The nursing staff had great difficulty keeping him out of his room during the day, as he only wanted to lie in bed, though he did not sleep during the day. He was continent of bowel and bladder. Although he was capable of performing ADLs he needed prompting to initiate or to complete them. He took no part in the patient meetings. Individual or group psychotherapy could not be attempted. He did not respond to various antidepressant medications over a fairly long inpatient stay.

Eventually a CT scan revealed a small medial frontal infarct. He slowly regained the impetus to move and to speak more than “no,” though his language remained sparse and he continued to participate in no activities. Psychiatrists on the unit...
Frontal Lobe Disorders and Dementia
continued from page 9

speculated that premorbidly he had a schizoid personality disorder, not feeling the need to associate with anyone. The personality disorder was exacerbated by the acute medial infarct. Although he still required assistance and prompting to perform ADLs, his family was willing to care for him and took him home on no medications.

The Geriatric Care Manager (GCM) could assist the family by suggesting a neurological workup with a neurobehavioral clinic or specialist, which had not been done. A trial of medication to improve initiation might prove worthwhile. The GCM could provide a caregiver or suggest adult day care, as he would need supervision during daylight hours. It would be extremely difficult to impel an individual with a medial frontal syndrome to do any activities, but he might be encouraged to walk slowly on a treadmill or ride a stationary bicycle for exercise. He would need prompting to maintain any activity more than a few minutes, however. Family may benefit from a referral to a stroke group or the Alzheimer’s Association.

Frontal Convexity Syndrome

The primary behavioral expression of the patient with a frontal convexity syndrome is apathy. The family’s feeling that the patient is apathetic may be the result of the lack of initiation with this syndrome. The affected patient appears to be indifferent and unmotivated, or unwilling to take appropriate action. Psychomotor retardation is often moderately severe. When angered, the patient may respond with a more normal speed of activation, though outbursts tend to be short-lived and the apathy usually recurs quickly. There is a tendency toward distractibility and the patient often cannot maintain a mental set. He may get quickly off-track in making a statement or performing an ADL. He may be stimulus bound. For example, when asked to place hands at “10 past 11” on a clock drawing, he may draw hands to the numbers 10 and 11.

Case Example: Mr. Tom Tarlow was a 60-year-old man with an AA degree who was seen with his sister Lisa Tarlow. He was married 10 years to his third wife from whom he was in the process of divorce. She had been very abusive over many years and most recently had beaten him over the head with a cane. A CT scan of the brain showed microvascular ischemic changes and an old left basal ganglia infarct. He lived on and off with his sister and nephew for the last 4 years due to the spousal abuse, and moved in with them a year prior to this evaluation.

His medical history included coronary artery disease, status post myocardial infarction with CABG 2 years prior, dyslipidemia, recurrent Major Depressive Disorder, closed head trauma, history of a small lacunar infarct in the left basal ganglia, peptic ulcer disease, COPD, and hypertension. He was on aripiprazole 10 mg ½ tablet QAM, citalopram hydrobromide 40 mg 1½ tablets QAM, hydroxyzine pamoate 25 mg BID PRN, co-trimoxazole DS BID, Plavix 75 mg daily, omeprazole 20 mg daily, pravastatin 40 mg daily, pancrealipase 1 tab daily, amiodipine 10 mg daily, gabapentin 300 mg daily, and atenolol 25 mg daily.

He was alert, but had flat staring affect. He was a little nervous, but denied feeling depressed or irritable. Speech was fluent with very low volume and generally linear but slightly slow thought processes. Ms. Tarlow reported that when she took him in, her brother weighed only 106 pounds because his wife had starved him. His appetite was now good and he gained 40 pounds in the last year.

Ms. Tarlow said that he lay in the yard 2½ hours after his heart attack in 2008 because his wife would do nothing for him. She said that her brother had never been violent and had never abused any of his wives. His wife accused him of trying to run over her with a truck. He did not speak up in court to deny the charge when accused by his wife and said almost nothing when questioned by the judge. He was convicted of the charge and was placed on one year probation and assigned to 6 months anger management treatment.

Mr. Tarlow’s wife admitted to police after the court conviction that she had lied about the charge. His wife claimed he had attacked her when he was the one who had physical damage from her attack, including broken fingers and bruising at the back of the head. That case was dismissed. Currently Mr. Tarlow would not eat, dress, bathe, or do any activity without prompting. His sister reported that he “just sits and watches TV all day.” He did not drive since his sister took him in.

On neuropsychological testing, most of Mr. Tarlow’s scores, including those for verbal and visual learning and memory, were normal. The only deficient scores were in visuomotor attention and language generation tests, probably representing slowed processing from the left basal ganglia infarct. Planning and organization skills were mildly impacted. The test pattern suggested an atypical dementia despite the lack of memory deficits. There was a significant frontal lobe...
syndrome, apathetic type. He initiated very little, including failing to initiate self-care. Thus, functionally he had a moderate dementia. His reasoning, judgment, and insight appeared particularly limited. He was much more passive indicating a personality change due to head trauma and basal ganglia infarct.

The GCM would be likely to advise a neuropsychiatric or neurology evaluation to determine appropriate medications to improve his initiation and his cognition. The GCM could help Mr. Tarlow’s sister provide structured daily programming for him to keep him physically and mentally more active. Suggestions such as laying out clothes and grooming items the night before may help. He would need constant prompting through his ADL routine due to his motor in-sistence. He needed 24-hour supervision for his safety. A caregiver in the home would allow his sister to work and participate in social activities. Alternatively, adult day care or assisted living on a memory unit might be considered. Exercise and other structured assisted activities would help maintain his physical health and well-being. Repetitive activities under supervision were suggested, such as sweeping the deck or raking leaves. A referral to the Alzheimer’s Association would help his sister.

Orbital Frontal Syndrome

The orbital frontal syndrome is characterized by impulsivity and disinhibition. Social disability may be the most prominent disability in these patients. They are often unemployable due to the social deficits. The patient may be hyperactive or hypomanic. Lability with prominent irritability or euphoria can occur. There may be sexual jesting or other inappropriate comments. Neurological and neuropsychological deficits are not common with this syndrome, though anosmia or lack of the sense of smell can occur due to the proximity of the first cranial nerve to the orbital area. A grasp reflex with involuntary grasping of objects may be present in some patients.

Historically, the best known example of the orbital frontal syndrome was that of Phineas Gage. At age 25, Gage was working as a well-regarded foreman on the Union-Pacific railway. He was hammering a tamping rod into a hole in the ground primed with explosives when the rod accidently blew up into his face. It penetrated the left zygomatic arch and exited at the left prefrontal area of the brain “passing back of the left eye, and out at the top of his head,” cauterizing the tissue as it passed through. Although Gage was thrown backwards onto the ground, shortly he was able to get up.

Gage had been well-regarded by his supervisors and work crew alike before the accident. A contemporary account reported that prior to the accident “Gage was an ordinary sober Yankee, intelligent, …with no peculiar or bad habits,” but after he was “fitful, irreverent, indulging at times in the grossest profanity… impatient of restraint or advice when it conflicts with his desires… obstinate, devising many plans of operation, which are no sooner arranged than they are abandoned in turn for others appearing more feasible.” He was unable to continue working. Gage was involved in multiple bar brawls, and made his living by allowing others the privilege of sticking their fingers in the hole in his head for two-bits each.

The following is a subtler example of the orbital frontal syndrome.

Case Example: Art Kelly was a 64-year-old retired realtor. He thought he had memory problems for 6 months, though his wife said it over a 3-year-period. He was independent with ADLs and IADLs, and drove without difficulty. His medical history included polycythemia vera, diabetes mellitus Type II, severe obstructive sleep apnea, hypercholesterolemia, hemochromatosis, ischemic cardiomyopathy, hypertension, and a history of pulmonary embolism with hypercoagulable state. He was on chronic warfarin as well as furosemide 40 mg daily, insulin glargine human 100 unit/ml 30 units SC BID, lisinopril 20 mg ½ tablet daily, metformin HCl 500 mg daily, methylprednisolone 4 mg as directed, metoprolol tartrate 25 mg ½ tablet BID, potassium chloride 20 mEq SA daily with food, and simvastatin 40 mg ½ tablet QHS.

Mr. Kelly’s wife reported he had odd behavior that frustrated her. For example, she wrote a note to him and placed it on top of his cap and keys so he would see it before he left the house. He did not read the note, putting it aside because it was on a Christmas label. He stated, “Why should I read it? It wasn’t even Christmas!” On another occasion, he directed a friend to the correct golf course where they had a reservation but he then drove another friend to the wrong golf course. She said he often stated that a mistake he made occurred because, “It wasn’t important to me.” During the testing, he made repeated inappropriate jokes about the examiner making him do pushups, which made no sense in the context of the testing.
Frontal Lobe Disorders and Dementia

continued from page 11

Mr. Kelly demonstrated virtually no cognitive deficits on testing, and in particular, memory scores were all normal. Many scores were above average. The only mild impairments were in conceptual skills, initial problem strategizing, and psychomotor speed. He had a very mild cognitive disorder that was likely due to a focal prefrontal lacune. He had behavioral components consisting of impulsivity, inability to integrate data, poor reasoning, and limited insight, judging his errors as “unimportant.” There were emotional components consisting of increased jocularity and irritability. The deficits reflected a mildly disinhibited frontal lobe syndrome with an indifference response; technically, he had a personality change. The indifference response referred to the fact that Mr. Kelly did not attach importance to any errors that he perceived or that were pointed out to him.

In this situation, the GCM might help Mrs. Kelly to provide appropriate context for her husband. Again, a neurological evaluation or neuropsychiatric evaluation might determine an appropriate cognitive medication. He was likely to continue to attach no meaning to his errors, but there was a higher likelihood of making fewer errors if the couple agreed on certain house rules. Increasing the organization in the household could help him stay on track. For example, his appointments might be written on a large calendar, posted in red. A particular bright-colored Post-it note could be used specifically for Mr. Kelly. His thinking ability was adequate to learn technological solutions such as following a programmed schedule on a computer or an iPhone. Mrs. Kelly would need help with problem-solving specific minor irritations and crises for her husband. A referral to the Brain Injury Association as opposed to the Alzheimer’s Association was more likely to help her because the disinhibited frontal lobe syndrome shared more features with brain injured patients with disinhibition than with those with dementia.

Conclusions:

The examples cited above provide opportunities for care managers to assist families in the early identification of possible frontal lobe disorders and the chance to direct clients to resources capable of assessing the cause or causes of behavioral changes. Armed with the findings of appropriate assessment, the care manager may work with both clients and family members to design programs of support to optimize client capability while working within defined deficits.

Neuropsychological evaluation is an important tool to help the care manager bring the best resources to the client for the right reasons. With a thorough neuropsychological assessment, the care manager can determine what cognitive strengths remain that can be used to assist the client and family and what cognitive weaknesses may be remediated with various tools or interventions. The family can have questions answered relating to changes in behavior, emotion, and personality. Potential for natural recovery may be assessed if the frontal lobe disorder is in the acute stage. Evaluations from other professionals may be recommended.

*Names in this paper are not those of identified individuals.

References


A Different Dementia: Different Challenges

By Sharon Mayfield, BSN

Summary

This article demonstrates different challenges that caregivers and an experienced nurse are faced with when their loved ones/clients have an FTD (frontotemporal disorders). The behaviors associated with this disorder do not respond to the usual techniques such as distraction. The diagnosis almost always causes deterioration in the relationship between the caregiver and the person with the disease because of the indifference and changes to their personalities.

I have been working with people who have Alzheimer’s disease and related dementias for many years as a registered nurse, assisted living administrator, and hospice palliative care admissions nurse, and consider myself fairly familiar with different techniques to make caregiving easier. This past year I have encountered a number of cases that are not dementias affecting the posterior parts of the brain as with Alzheimer’s, but affect the temporal and frontal lobes. People who have frontotemporal disorders (FTD) present different symptoms and the caregiving approaches that have worked in the past with people who have Alzheimer’s disease do not necessarily apply.

Frontotemporal lobe disorders are often described as a slowly progressive deterioration of social skills and changes in personality or impairment of language. These clients often are 65 years of age or younger and might still be employed. The symptoms are often misunderstood as the disease progresses, and misdiagnosis occurs about 50% of the time. One of the hallmarks of this dementia is that the person with FTD lacks empathy or sympathy for the caregiver even when the caregiver is in pain or critically ill. Another key feature, unlike with Alzheimer’s disease, is that there may not be any short-term memory loss. I have learned many lessons while assisting families in their caregiving roles and will share some of my experiences.

Some behavioral changes were present in a gentleman that I took on a shopping trip to the local Wal-Mart. Our conversation in the car was normal except for occasional word searching. But because I have learned to “speak” dementia, he felt understood without any anxiety. Once inside the store, his social disinhibition began to surface. He met the Greeter like a long lost friend, shaking his hand and giving him a hug. I took a deep breath and thought this was a good omen. The next man we encountered was rather large and tall.

I maneuvered us away from that scene and into the next aisle where two children were bouncing the balls from a display. “Put those balls back,” he shouted. I had to say, “Now you did not wear your referee shirt so you

continued on page 14
A Different Dementia: Different Challenges

continued from page 13

can’t give orders!”

The next adventure occurred when he needed to use the bathroom. I told him I would wait for him just outside of the restroom. Then I could hear him introducing himself to everyone and I could just picture him shaking their hands. One man came out and saw me with a worried look. He asked if he could help. I asked him to direct the man he had just “met” out to me, as he could not find his way out of the restroom. Later we encountered this same man with his wife. He too, must have had some experience with dementia because he greeted my client by name and shook his hand and introduced him to his wife. What a good encounter! But before we could get out the door he had asked another gentleman for $2.00 and the man had his billfold out before I could add that he was kidding. Luckily this was another person with experience with persons with dementia, as he said he would lend him a couple of bucks anytime. All this occurred in a forty-minute shopping trip. I was grateful to leave the store intact without any shop lifting, which he had done in the past when his wife had taken him shopping. It was still challenging.

Contrast that episode with another client who lives to shop and is fixated on having access to money. It occupies his mind most of the time. Before he had been definitively diagnosed, he had run up quite a gambling and shopping debt on line. Even though he had been an accountant, he seemed completely unaware of his spending. His wife has had to return to work to help to pay off the credit card debts. She has also tried to take steps to be sure that this spending is not repeated. She has also had to lock her purse in the trunk and hide the car keys to keep them from him to be sure that she has some money for parking, etc. She was surprised to discover that he had intercepted the delivery of the new checks and had removed several checks from the middle of the check books for his later use.

He has had a companion that takes him out for lunch one day a week, and the presumption had been that he could take him on some errands so that his wife would not have to do these errands after work. He has brought his wife’s silver certificates to purchase a bird house. He once went to the bank, and with only his driver’s license and no account number or checks, was assisted by the bank staff to withdraw money.

Sometimes he compulsively eats and drinks. He drank 14 containers of V8 juice in 5 days. He often calls his wife at work 20 times a day to ask her to bring home more ice cream. He does not have short-term memory loss to account for this, but once he is on a task like this he persists until his goal is obtained. He cannot be diverted from his cause. He smokes continuously.

Despite all of this, he can carry on a good conversation at other times and appears perfectly normal when he is groomed to go out.

Another lady that I worked with had difficulty with language. She would search for words and often used words that did not make any sense. She appeared unkempt, as she had become resistant to grooming and bathing. She was about 55 years old when her husband had noticed that things were not right and was diagnosed at age 58. This lady would greet me like an old friend, and initially I could take her to get her hair and nails done if I stayed by her side in the stylist chair and kept up the conversation.

She seemed to be deteriorating quickly. Her husband was her sole caregiver and he tried very hard to keep all the conversations light and silly (she responded to silly). He felt most at ease when she was seat belted in the car listening to music that they loved.

She could no longer figure out the order for doing tasks. She was totally continent but could not figure out the toileting sequence. She would begin to pace around as her bladder filled. When they were out in public a public restroom with signage aided in giving her enough clues so that she could complete the task. At home she would pace around the apartment, seemingly not hearing requests to help her to the bathroom. Then something would “click” and she would go to the bathroom, navigate the button and zipper on her jeans and successfully sit down on the commode and void. This cycle continued about every 2-3 hours. If the pacing was interrupted, she would strike out.

Sometimes she would strike out for no apparent reason. It got very difficult for her husband to take her out in public, as sometimes she would not get back in the car, and he would have to pace around with her hoping nobody thought he was trying to kidnap her. She also had some visual deficits that prevented her from seeing depths, and she was unaware of others around her.

Her husband was very concerned that she was not stimulated enough. She had been very artistic and had
made beautiful quilts and had lived abroad and enjoyed many different cultures. She was apathetic toward most activities. But researchers say that they are not bored.

When she paced, it was as though she was in a trance. Intrusion by others at such times resulted in aggressive behaviors. One effective tactic for me during these times was to try to blend into the background while monitoring for safety. I even resorted to wearing clothing that blended in with the sofa.

Sadly the lady in the above scenario had symptoms that escalated very quickly. In the course of three months she went from shopping with me at the mall to a secured dementia unit that required that a 24/7 caregiver be with her. She physically aged in appearance and lost weight, as she only ate when she paced. She eventually became incontinent and was very resistant to being changed. Medications were changed, and she underwent a stay in a geriatric behavioral unit. When she takes her medication and it has time to get into her system, she can have a social side and is able to arrange fabric strips to her liking. Her doctor describes her condition as being one of “global brain deterioration” with frontal lobe involvement. There some reports that state the life expectancy of people with frontotemporal lobe disease is half that of those with Alzheimer’s disease.

Another caregiver found some solace in yoga and goes into his “yoga state” when he has to deal with his wife’s difficult periods. All would agree that you will not be successful if you are stressed and exhausted. A local caregiver, Bill Matson, has written about his struggles in the Mooresville Tribune. He states, “I often sign my correspondence by saying ‘from the foxhole’ because that’s how I feel.”

I can only begin to appreciate the battle that is waged every day by these caregivers. There is no cure but my mission is to try to ensure that this disease is not fatal for the caregiver as well.

Sharon Mayfield attended the Ohio Valley General Hospital School of Nursing and received her BSN from West Liberty University, West Liberty, WV. She has owned and operated her own assisted living community as well as worked as Director of Operations for Hunt Assisted Living. She is a former hospice nurse.

Sharon currently owns the Seniors Helping Seniors franchise in Charlotte, NC where she matches seniors who need non-medical care with other seniors who can provide it. She has a special interest in providing care for the “caregiver,” especially those who are dealing with dementia.