

## Chapter 2

# Signposts: What to Look for and When to Seek Help

*Not knowing is worse than knowing*

If you are reading this book, you probably have some knowledge of dementia and its warning signs. However, much more awareness is needed, including in the medical community. Unfortunately, patients are very often not diagnosed with dementia or referred to dementia specialists until 2–3 years after the onset of their symptoms [1]. Not only laypeople, but many medical professionals, continue to hold a mistaken and outmoded viewpoint that nothing can be done for dementia. This nihilism is unwarranted and can even be harmful in delaying or preventing appropriate intervention or resulting in inappropriate or deleterious treatment. Earlier detection of dementia often allays anxieties about unnamed and undiagnosed problems and allows a chance to capitalize on planning, treatment, and research opportunities.

### **Common sense rule: Most types of dementia are treatable.**

Dementias are complex and often require comprehensive evaluation by a specialist (or specialists) for specific diagnosis. This book focuses on finding such an expert and optimal care of a patient already diagnosed with dementia, but, because proper diagnosis is one of the foundations of patient care, it is important to review the basics of what is—and what isn't—indicative of a possible dementia.

A 73 year-old man, who was a retired engineer, was brought to the dementia clinic by his family. He had been having memory problems for 9 months which concerned all of them (patient and family), and his family was also worried that he had become socially withdrawn from interactions with them and others and was much less active than used to be. (Until the last few month, he had golfed several times weekly and attended his grandchildren's ballgames.) He had been diagnosed with "depression" and prescribed alprazolam (trade name: Xanax) twice daily by his primary care physician. He had no prior history of depression and continued with significant memory problems, as well as anxiety, on alprazolam. After a comprehensive assessment, including neuropsychological evaluation and brain MRI, he and his family returned for a follow-up visit. The specialist discussed test results and diagnosis, which was Alzheimer's disease (AD). Although the patient and his

family expressed the typical dismay in hearing this diagnosis, all acknowledged that it was a relief to know the reason for his problems. The dementia specialist encouraged resumption of prior activities and directions for tapering off alprazolam over a couple of weeks. At a second follow-up visit, the patient and his family reported that he was not having any anxiety, had resumed his usual social and other activities with his previous level of enthusiasm, and his thinking actually seemed a bit clearer off of the alprazolam. Prescription cognitive enhancers were gradually added over the next few months.

This case points out the sometimes essential role of a dementia specialist in proper diagnosis and treatment of dementia, including selection of medications. In our experience, many well-meaning general practitioners may prescribe medications for dementia symptoms that actually exacerbate memory loss or other problems. We have also found that geographical distance between a patient and family members may be a significantly contributing factor to a family's lack of knowledge regarding a patient's cognitive, behavioral, and functional difficulties. However, case after case has made clear to us that even families who live relatively close by may also lack awareness of such problems or the consequences, including the need for familial, medical, or other intervention. (In fact, because the symptoms occur so slowly and gradually, those closest to the patient may not recognize the problems or how much they have "taken over" for the patient.) Any memory problems that interfere with daily function are not normal and indicate the need for medical attention. Since a patient with such difficulties is unlikely to initiate a medical assessment, it is important for loved ones to recognize and address these issues.

Although memory impairment is the most common presenting symptom of dementing illness, it is by no means the only one. Dementia may begin with changes in a person's cognition, behavior, or function, but it can also begin with motor problems. How a dementia begins is often key to making the diagnosis. This is so important as to reiterate this point: *Knowing the initial signs of a dementia may clinch the diagnosis.* In medical school, we were taught that "the patient makes the diagnosis," meaning that the history of how an illness presents and progresses leads to an answer of what disease process it is. In the case of dementia, it is more often the family that "makes the diagnosis." This is because one of the earliest signs of dementia is loss of insight (loss of awareness) into one's problems, such that sometimes the problem is not even recognized by the patient. Since patients may forget or have unawareness (anosognosia) of details important in discerning the diagnosis, it is crucial for family members to communicate problems to the doctor or other examiner (see Chaps. 4–5 for help with this).

This chapter deals with some specifics of dementia and WHEN medical attention should be sought. The symptoms concerning for dementia are seen in three main areas, which can be thought of as the "ABCs" of dementia: Activities, Behaviors, and Cognition. Memory loss is the most common sign of dementia.

**Common sense rule: Memory loss is the most common, but not the only, sign of dementia.**

As dementia specialists, we are often asked when medical attention should be sought for memory problems. The first principle is that memory loss that interferes with daily function is not normal. Such memory loss may or may not be related to

dementia, but demands medical attention. The same applies to other cognitive or behavioral problems that prevent a person from independently performing his or her usual activities.

**Common sense rule: Serious problems should be taken seriously.**

## Selected Types of Dementia

Not are dementias inherently complex, but every individual has a different onset and course of disease. And, of course, there are exceptions to every rule. We recommend that those interested in more detailed and unusual facets of dementia diagnosis consult the many textbooks (e.g., [2, 3]), articles, and courses devoted to such considerations. We therefore present the following thumbnail sketches of some common dementia types to help in understanding some basic types of common dementias, but, by no means do these brief summaries represent comprehensive diagnostic guidelines.

### *Alzheimer’s Disease*

#### Signs of Alzheimer’s Disease

Since Alzheimer’s Disease (AD) is the most common and most widely studied dementia, let us begin with it as our archetypal dementia. The six As of Alzheimer’s Disease is a useful way to summarize the five areas of cognition that may be impaired as well as to acknowledge that mood and behavior may also be affected [4]. Note the “A” that is not on the list: Attention. This is because simple attention is usually initially well preserved in AD (Table 2.1).

AD is a common disease and the most common form of dementia [5]. Age is usually the greatest risk factor for disease and AD typically affects people aged 65 years and over. Memory is often the “first and worst” problem and is said to “lead the way” in AD. AD usually starts with subtle memory loss and gradually progresses (over years) to affect other cognitive domains, such as language, visuospatial skills, motor skills, executive functioning (e.g., judgment), as well as behavior. Patients with AD

**Table 2.1** The six As of Alzheimer’s disease

The six As of AD	Common initial symptoms in AD
Amnesia	Forgetful of recent people or events
Agnosia	Difficulty recognizing faces or objects
Aphasia	Problems coming up with names of people or objects
Apraxia	Impaired ability to operate new car, phone, computer, or gadgets
Abstract reasoning	Loss of insight (e.g., reduced awareness of memory problems) (executive functioning)
Affect and behavior	Apathy, social withdrawal

typically have anterograde amnesia or “encoding” memory deficit in which they have significant difficulty learning and remembering information even when given cues (hints or clues). The memory loss usually begins with recent (“short-term”) memory, such that the newest information is the hardest to remember. As the disease progresses, remote (or “long-term”) memory also starts to fade. To give one example, in the first few years of AD, a patient may start forgetting the names of his or her grandchildren (as these are newer members of the family) and later forget the names of more established family members, such as his or her grown children. Eventually, he or she may confuse present family members for those he or she knew as a child. Another example would be forgetting a recent significant event like a wedding, a party, or a funeral (or the details of such a happening), while still retaining memories from decades ago related to school, family life, work, military service, or social activities. As AD progresses, a patient may tend to dwell in the past and eventually even have difficulty recalling these older (“long-term” or remote) memories.

### *Mild Cognitive Impairment*

Mild Cognitive Impairment (MCI) refers to dementia-type symptoms that are so mild as not to interfere with a person’s daily functioning. According to the clinical consensus criteria as set out by a National Institutes of Health expert panel [6], MCI refers to cognitive problems, usually including memory loss, that meet several criteria. The symptoms may be identified by a patient, a family member, or a clinician. The diagnosis should be made clinically, including by formal neurocognitive testing, but may include neuroimaging and additional tests of blood, spinal fluid, etc. A key point in diagnosis of MCI means that a patient retains independence with his or her daily activities and therefore does not meet the criteria for dementia. However, over 5 years, about eight out of ten patients diagnosed with MCI progress or “convert” to a diagnosis of AD (or sometimes other forms of dementia) at a rate of 12–15 %/year [7]. Therefore, MCI usually represents the earliest clinical manifestation of AD [7, 8]. In this book, we generally refer only to dementia, but many of the same issues apply—or may have future application—for patients with MCI and their families.

Besides pure AD, many other kinds of dementia are common. These include Vascular dementia (VaD), Mixed dementia (AD + VaD), Dementia with Lewy bodies (DLB), Parkinson’s disease dementia, and Frontotemporal dementia (FTD).

### *Vascular Dementia*

VaD is a dementia caused by one or more infarcts (strokes) in the brain and/or stroke-like changes of small blood vessels (microvascular disease or leukoariaosis) [9]. VaD is also sometimes referred to as Multi-infarct dementia, but since it is not

necessary to have *multiple* strokes to incur this diagnosis, we use the more commonly preferred term of VaD. If a patient with VaD has a head MRI or CT, the report of the radiologist may describe microvascular disease as chronic small-vessel ischemic disease or something similar.

The symptoms of VaD may relate to the brain area or areas most affected by vascular disease. Because microvascular disease typically affects the white matter connections of the brain, it interrupts pathways, resulting in slower responses by a patient. You can think of this as “taking the long way home.” Thus, this patient eventually arrives at a correct response, but in a more circuitous manner than normal, just as you might have to go a longer way if you were driving and your usual route home was blocked. Similarly, VaD often causes a retrieval memory deficit such that a patient with VaD can recall information if given cues (hints or clues), so their memory is often somewhat better than a patient with AD with an encoding memory deficit (in which the information is not learned and/or stored such that cues do not help). That said, a patient with VaD may have a “retrieval” memory deficit, an encoding memory deficit, or a mixture of these types depending on the areas of the brain affected by vascular disease.

Patients with VaD also often have more striking emotional or “affective” changes than patients with AD. They may also have apathy, depression, agitation, disinhibition (with more impulsive/childlike behavior), personality changes, or a combination of these.

VaD should be considered in patients who have cognitive and/or behavioral problems, particularly those with a history of stroke(s). This may be by history (someone who has had symptoms of a stroke/s) or radiographically (e.g., on head MRI and/or CT). The term “silent” stroke/s refers to an infarct seen on neuroimaging, such as MRI or CT, but with no known clinical symptoms.

In many cases, patients with VaD also have vascular disease elsewhere besides the brain, including the heart (cardiovascular disease) and peripheral vasculature (e.g., peripheral arterial disease). Risk factors for vascular disease associated with VaD include smoking, hypertension (high blood pressure), cholesterol abnormalities (dyslipidemia, hyperlipidemia, hypercholesterolemia), obesity, diabetes, obstructive sleep apnea, and excessive alcohol use. Identifying and treating (or avoiding) these vascular risk factors are crucial in addressing the root problem/s from which VaD stems. They should also be dealt with in other forms of dementias, including AD, to which they also may contribute [10].

VaD may have a more indolent (slower) course than does AD, but the patient’s overall course is highly dependent upon the number and extent of vascular risk factors. If these can be minimized, then the prognosis may improve. If the vascular risk factors continue—or worsen—the patients’ overall vascular status, including their cerebrovascular function, will most likely decline. The progression of VaD also differs from AD in that it may be stepwise (with sudden decrements followed by periods of plateau/stabilization) representing time points at which strokes occur. Some recovery of acute symptoms may even occur, but the overall course is one of gradual worsening.

## ***Mixed Dementia***

Mixed dementia is not a mixture of any old type of dementia but refers to the specific combination of Alzheimer disease and VaD. As one might expect, the symptoms, course, prognosis, and duration are thus a blend of these two dementias and vary based on the degree of each involved. Here again, optimizing the treatment of any vascular risk factors can affect the patient's overall health as well as the course of his or her dementing illness.

## ***Parkinson's Disease Dementia***

The cardinal signs of Parkinson's disease (PD) are rest tremor, bradykinesia (slowed movements), rigidity, and postural instability (tendency to fall backwards). These motor symptoms typically respond to treatment with antiparkinsonian medications and progress very slowly (over decades). Some 20 % of patients have cognitive deficits in the early stages of PD and round 30–50 % of patients with Parkinson's disease develop dementia but this usually occurs at a relatively late stage of the disease [11]. The cognitive symptoms of PD tend to differ from AD in that they often include bradyphrenia (slowed thinking), as well as impairments of attention and a retrieval memory deficit (rather than the typical encoding memory deficit of AD) [12].

## ***Parkinson's-Plus Syndromes***

These include DLB (also called Lewy body dementia or Lewy body disease), Progressive Supranuclear Palsy (PSP), Motor system atrophy (also known as Shy-Drager disease), and Striatonigral degeneration. Patients with any of these syndromes have parkinsonism with some, but not all, of the cardinal motor features of PD. They also often have other symptoms distinguishing them from pure PD. Moreover, Parkinson's-plus syndromes do not tend to respond (or at least not as robustly) to antiparkinsonian medication. Therefore, they often progress over a few years (rather than over decades as is typically the case for PD).

DLB deserves mention as it is a common cause of dementia. DLB refers to a combination of dementia, parkinsonism (Parkinson-type symptoms), psychosis (usually vivid visual hallucinations, but delusions and other types of hallucinations may occur), and cognitive fluctuations, all transpiring within just a few years (usually less than three) [13]. Patients with DLB tend to have cognitive and behavioral symptoms similar to those seen in Parkinson's disease dementia but these progress more rapidly. The motor symptoms of DLB are often initially less extensive than

those of Parkinson's disease (and tremor may be lacking), but do not usually respond as well to antiparkinsonian medications and tend to progress over just a few years (rather than over decades for Parkinson's disease).

More information is available through the American Parkinson's Disease Association at [www.apdaparkinson.org](http://www.apdaparkinson.org) and [www.lbda.org](http://www.lbda.org), the Website for the Lewy Body Dementia Association.

## ***Frontotemporal Dementia***

FTD is a disease that typically affects people under the age of 65, especially in their fifties or sixties, and may even be the most common dementia in this age group [14–16]. Like AD, gradual onset and progression are typical. Unlike AD, in which memory loss is the most prominent symptom, the first dementia symptoms in FTD are typically language or behavioral problems [17–19]. Thus, this disease may first be misdiagnosed as a stroke with aphasia or a psychiatric illness (such as depression or bipolar disorder) in a patient with no prior psychiatric history. Patients may also present with motor symptoms, such as weakness or Parkinson's-type symptoms (parkinsonism). The patient's age as well as the onset, course, and associated signs and symptoms are keys to the disease and careful neurological work-up is important in making the correct diagnosis, addressing any motor aspects of this disease, pointing the way to appropriate treatment, and helping to avoid unnecessary, futile, or even harmful evaluations or treatments. The clinical presentation (as well as the pathology) of PSP and FTD overlap, so PSP may present with FTD and parkinsonism may later develop, or vice versa.

Helpful Websites for FTD include:

The Association for Frontotemporal Dementia: [www.theaftd.org](http://www.theaftd.org)

Northwestern University Feinberg School of Medicine Cognitive Neurology & Alzheimer's Disease Center [www.brain.northwestern.edu](http://www.brain.northwestern.edu)

University of California, San Francisco Memory Clinic: [www.memory.ucsf.edu](http://www.memory.ucsf.edu)

There are many, many other types of dementia and if you are concerned for a patient or a loved one who doesn't have the typical onset and course of AD as outlined below, evaluation by dementia specialist, in conjunction with good primary medical care, may be imperative to identify alternate causes. If you are concerned about a type of dementia not specifically listed here, you can consult with your medical professional/s, as well as books, associations, and Websites dedicated to specific forms of dementia. The National Institutes of Health A–Z list of diseases is especially helpful and can be found at [www.nih.gov](http://www.nih.gov). And, keep reading, the following chapters are meant to help professional and family caregivers of patients with dementia—no matter what the type.

## ***Traumatic Brain Injury***

Traumatic Brain Injury (TBI) is a complex subject since each trauma leaves its own distinct signature and may be affected by age, preexisting trauma, or other medical issues. Besides the type, location, and extent of any given injury (including any loss of consciousness), repetition of brain trauma may contribute to cognitive and behavioral deficits. TBI may result from many causes, including deprivation of oxygen to the brain. Brain injury, particularly repeated trauma with extended loss of consciousness, can also predispose to the development of dementia [20]. Repeated sporting-related head trauma has been linked with Chronic Traumatic Encephalopathy [21]. (Encephalopathy refers to cognitive and behavioral impairments which are permanent and may be progressive.)

## **Other Diagnostic Considerations**

In discussing what dementia is, it is also important to consider what is *not* dementia. Before making a diagnosis of MCI or dementia for a patient with gradual cognitive and/or behavioral decline, a medical work-up should be done to evaluate for other possible primary or contributing causes. Potential etiologies may include depression, thyroid problems, alcohol dependence, certain medications, B12 deficiency, obstructive sleep apnea, and neurosyphilis. All may be treatable to some extent.

Dementia is typically not a “fast” process, but one that occurs gradually over a period of years (even the so-called rapidly progressive dementia, which is rare, occurs over months to years). If mental processes deteriorate (or seem to) at a faster rate (than years), this generally indicates one of several possibilities:

One, the cause is not dementia, but something else, such as a delirium, which can cause mental status changes over a period of hours. As a general rule, the rate of the deterioration is directly proportional to the speed to which one should seek medical attention. That is, the more abrupt the change, the sooner that professional evaluation should be sought. Causes of delirium include head/brain injury, stroke, seizure, infection, alcohol, and drug effect (this can include legal medication taken in recommended dosages). If a person’s mentation changes over a period of hours (or shorter), this suggests a serious medical cause, but because of the potential for reversibility, if the cause can be properly identified and treated in a timely fashion, the need for immediate medical attention is underscored.

Of course, a delirium may be superimposed upon a dementia. This often makes diagnosis of dementia in the acute situation difficult, if not impossible, as any delirium must be addressed first and may obscure (and/or exacerbate) an underlying dementia. Diagnosis of an underlying dementing process may be made tentatively or even deferred until resolution of a delirium. It is also important to stress that patients with dementia may have delirium (and are in fact at higher risk for it) and the presence of a dementing illness may obscure diagnosis of an accompanying



delirium. For a patient with a previously diagnosed dementia, it is important for those who know the person well, including family and professional care providers, to note sudden changes in thinking, behavior, or daily function. Furthermore, family members and others should emphasize these changes and act as the patient's advocate in asserting the need for medical intervention, even in a medical setting. In our experience as dementia specialists, those who do not know the patient well, including health care professionals, may minimize such mental status alterations in a patient with a prior diagnosis of dementia:

An 82 year-old woman with Alzheimer's disease was living at home with her family. They noted her to have increased confusion with sudden interruption in conversation for several minutes two nights in a row. The first evening, the family had brought the patient to an urgent care clinic and were told that "Oh, she just has dementia" and they should expect her to behave this way as she was "sundowning." However, this was such a marked change from her usual behavior that, when it happened again, they brought her to the emergency department of a local hospital. A doctor there noted that the patient appeared to be having possible visual hallucinations and kept looking to the right. The doctor discussed this with her family who said that they had never noticed her to have such symptoms before. The doctor suspected that something like a stroke or infection which might be causing this, but a CT scan of her head and tests of blood and urine were normal. The doctor then called the patient's neurologist who also indicated that the patient had no history of hallucinations, but that she did have a similar episode of confusion and decreased responsiveness a month prior. An outpatient electroencephalogram (EEG) had been done around that time, but did not show any abnormal epileptiform activity that would suggest a seizure. However, both the neurologist and emergency physician agreed that the patient's history was now even more concerning for possible seizures and that these might be captured on an EEG while the patient was having such symptoms. Therefore, an EEG was performed in the emergency department. The patient was found to have abnormal epileptiform activity consistent with seizure. She was started on seizure medication, her symptoms resolved, and she did not have any further spells. Her family and neurologist agreed that her behavior had also returned to her usual baseline (i.e., what was normal for her) after starting such medicine.

In such a scenario, it is extremely helpful to consult with the patient's usual medical team for input into the alteration from their usual medical condition. And family members shouldn't assume that hospital personnel, either in the emergency department or elsewhere, will automatically contact a patient's primary care provider or specialist.

We recommend that family members not only request emergency or other hospital personnel to inform a patient's existing medical providers of admission (to the Emergency Department and/or hospital), but that the family also call the patient's usual medical team to ensure that they are informed of the patient's situation. We believe that any good primary care physician wants to know when and why one of their patients has to go to the hospital and that any dementia specialist following the patient does as well, whether to provide professional medical history/records for the patient and their hospital team, make medication recommendations, visit the patient, or to provide information for the patient's medical record and follow-up care regarding changes in clinical course, hospital evaluation, and/or any medication reactions. Someone, be it a family member and/or medical professional, who is familiar with a patient's history can make all the difference in advocating for the patient's best interests and helping secure the most appropriate medical care.

Another explanation for cognitive decline in dementia that is faster than expected is that a person with a dementing illness may have “unmasking” of the disease due to a stressor (and more often, multiple stressors) which makes the onset appear more abrupt than it actually is. In our clinical practice, the most common stressors are hospitalization, surgery (whether or not hospitalization is involved), death of a spouse or other caregiver, and/or a move. Hospitalization often involves a number of stressors, including being away from one’s home, family/caregiver, and daily routine; pain; illness; addition or alteration of medications; as well as surgical and/or other medical procedures, invasive or otherwise. A person with dementia may function well in his or her own environment, but be extremely vulnerable to decompensation, which serves to make the change in his or her mental status appear much more abrupt than it actually is.

A 74 year-old man who lived alone was admitted to a Veterans’ Affairs hospital with gastric distress and underwent various gastric procedures. He was issued the standard hospital hygiene kit, but seemed befuddled as to how to perform basic Activities of Daily Living (ADLs), such as shaving. His family was consulted and they reported that he had no problems living independently, including using the shaver that he had kept in the same location on his bathroom shelf “for 40 years.”

Another possibility is that a patient’s history is unknown, not well known, or not recognized as a problem until the occurrence of a significant crisis.

A 78 year-old woman who lived alone was admitted to a geriatric medical floor for correction of dehydration after she was found on the floor by her family after she had a fall. Her geriatric team requested consultation from a dementia specialist after the patient persisted with cognitive problems even after her dehydration was corrected and no other significant medical problems were found. The geriatric team had spoken with the family who confirmed that the patient lived alone and “independently.” The dementia specialist evaluated the patient and found her to have excellent attention (which is usually impaired in cases of delirium) but moderate-to-severe impairments of memory and executive functioning. The specialist obtained new history from the family which indicated that the patient didn’t drive and that, over the last year, they had assumed management of her finances and done all of her grocery shopping and some of her housekeeping.

## Summary

The main aspects, or “ABCs,” of dementia are Activities, Behaviors, and Cognition. Memory loss is the most common sign of dementia, but there are many types of dementia and even the same type of dementia may differ in presentation among individual patients. While dementias are generally not curable, and few are reversible, such illnesses often can be treated to some extent. It is important to identify and treat any other medical conditions, such as delirium, which may worsen or mimic a dementia. If this chapter has helped you decide that you do, in fact, need to get help for someone with dementia, the next chapter will guide you on the how-to of finding it.

## Websites

Alzheimer's Association: [www.alz.org](http://www.alz.org)

American Parkinson's Disease Association: [www.apdaparkinson.org](http://www.apdaparkinson.org)

Lewy Body Dementia Association: [www.lbda.org](http://www.lbda.org)

Association for Frontotemporal Dementia: [www.theaftd.org](http://www.theaftd.org)

Northwestern University Feinberg School of Medicine Cognitive Neurology & Alzheimer's Disease Center [www.brain.northwestern.edu](http://www.brain.northwestern.edu)

University of California, San Francisco Memory Clinic: [www.memory.ucsf.edu](http://www.memory.ucsf.edu)

The National Institutes of Health: [www.nih.gov](http://www.nih.gov)

## Common Sense Rules

- Most types of dementia are treatable.
- Memory loss is the most common, but not the only, sign of dementia.
- Serious problems should be taken seriously.

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