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**Mini Review** 

# Dementia is a Serious Disorder of Memory and other Intellectual Abilities

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# Abstract

Dementia is a term that denotes primarily memory impairment and then other intellectual abilities and personalities. This condition has consequences not only on the sick person, but also on his complete environment, as the demented person becomes more and more dependent on someone else's help. Dementia is a syndrome caused by a disease of the brain, and is usually a chronic or progressive course, but there is always multiple impairment of higher cortical functions such as memory, thinking, orientation, understanding, calculation, learning ability, language and reasoning. Dementia causes a significant decline in intellectual functioning, but also disrupts daily life activities such as dressing, washing, taking food, maintaining personal hygiene, and especially physiological activities such as urination and stool. The decline in intellectual functioning is very individual and primarily depends on the patient's socio-cultural milieu. When diagnosing dementia, one should always pay attention to the decline in the ability to think and remember, which directly leads to impaired activities of everyday life. In dementia, it is characteristic that memory is impaired during the acquisition, storage and reproduction of new information, and the contents that are known from before can also be lost, especially in the later stages. Dementia is not just a memory disorder, but there is impaired thinking, the ability to reason, and a reduction in the creation of new thoughts and ideas.

Keywords: ophthalmological damage; chronic eye diseases; kidney

# Introduction

This broad range of mental disorders is common in primary care, with prevalence rates reported in the range of 30–50% [1]. Many of these very varied disorders can be successfully treated or managed in a way that reduces and minimizes their impact on a person's life. Mental disorders that are serious enough potentially to complicate the management of physical health problems are also common. Accident and emergency (A&E) departments frequently see patients who have self-harmed or have suffered injuries owing to substance abuse. A person dependent on alcohol who is admitted for surgery may develop withdrawal symptoms and delirium tremens some days after admission to hospital because of forced abstinence from alcohol. Other examples are anxiety and depression, both of which may arise on a general medical ward in the context of a diagnosis of a life-limiting physical illness. People may also present with symptoms that are not readily explained in which anxiety and depression may be a significant factor.

Dementia is common in older people admitted acutely to hospital and in most cases it has not been previously diagnosed. If these patients are admitted to an unfamiliar hospital environment, their behavioural problems can worsen and they may suffer a sense of bewilderment or psychological distress. Similar symptoms may be associated with an organic confusional state (delirium) that requires investigation and treatment in its own right. Studies have reported that perhaps 40% of people on a general medical ward have impaired decision-making capacity, much of which is likely to be secondary to a comorbid mental disorder. Thus, in all health settings and across all health disciplines, practitioners will be faced with clinical situations in which the co-occurrence of mental ill-health or the presence of cognitive impairments might result in, or contribute to, difficulties in clinical management that are ethically and legally challenging.

#### Changes

Dementia has an enormous impact on daily living of people with this disease and for all surrounding them [2]. One of the most prominent challenges in dealing with dementia is the creation of an appropriate and effective interaction. The dementia process causes direct communication impairments due to pathological changes in particular brain regions (e. g. anomia, aphasia, impairments in motor performance of speech). But the major part of communication and interaction problems is a result of misadjustment between dementia related impairments, available

capabilities of the person with dementia and the competency of the environment to deal with the communication difficulties.

One of a dominant characteristic associated with dementia are, along with cognitive impairments, the changes in behavior of people with dementia. Behavioral changes are one of the first signs of dementia and they accompany people throughout the entire course of the disease. These behavioral changes have a lot of different names: disturbing, problematic, challenging, neuropsychiatric symptoms, need-driven, reactive, behavioral and psychological symptoms of dementia and many more.Behavioral changes are challenging for family members and professional carers. They are disturbing and stressful and are responsible for heavy burden on formal and informal carers. People with dementia showing challenging behavior are at higher risk for psychotropic drug use and use of restrains. There is a higher risk of health problems, increased care dependency and hospital and nursing home admissions. As a consequence, the behavioral changes influence the quality of life, autonomy and self-esteem negatively. For these reasons there are a lot of research efforts with regard to developing interventions which can prevent or decrease the occurrence of challenging behavior. For the home care setting the research activities focused mostly on training and counseling of caregivers on various topics (e. g. coping strategy, handling, and access to the services).

#### Neuropathology

Especially in the emerging era of presymptomatic diagnosis of dementing illnesses, the issue of how best to consider multiple causes requires consideration anew [3]. An important challenge is the realization that the specificity of cause, symptoms, and neuropathology is much fuzzier than had been appreciated, especially in very old people. Dementia chiefly happens not just in older adults but, as is becoming clear from an emerging body of evidence, it arises largely in people who have many health deficits. Despite many patients having distinct symptomatic profiles in relation to the type of dementia that they have, as age increases, overlap of symptoms is common. This overlap also extends to the underlying neuropathology, something that especially has been revealed by prospective, community-based studies. The fact that autopsy series in community-dwelling older adults show that many have mixed pathologies (up to three quarters in some series) has implications, especially for our understanding of mechanisms. Interpretations vary as to how often dementia arises as a result of complex constellations of underlying neuropathology versus the simple fact of cumulative damage. Whether neuropathology under these circumstances will retain its iconic "gold standard" status or whether it will be viewed best as an aspect of construct validation (another factor to be considered) is debatable. Other consequences arise. From a clinical standpoint, DSM-V modifications have been argued to be most in line with this new reality and are held to provide clinicians with a common language that can thereby be used to describe overlapping symptoms and set these in the context of distinct profiles. Against this background, it remains to be seen how much sense it makes to view patients with single-gene mutations in earlyonset dementia as offering "proof of concept" for diseasemodifying therapy that might avoid late life dementia in people with a panoply of causes. Very early attempts at combining biomarkers (e.g., within cerebrospinal fluid [CSF] or across modalities) showed that dementia tests are not exempt from trade-offs in sensitivity and specificity.

An additional challenge to the interpretation of the many causes that give rise to dementia in older people is overlapping pathology, which may be more the rule in older adults where Alzheimer pathology can overlap with vascular or Lewy bodies and other age-related changes. Furthermore, each of these pathologic markers can be present in patients who are apparently cognitively intact. Further challenging the present understanding is that older people can decline cognitively without obvious brain changes other than atrophy, at least as detectable by current techniques.

#### Symptoms

Neuropsychiatric symptoms may precede a dementia diagnosis and are more common in people with mild cognitive impairment than in cognitively intact older people [3]. Neuropsychiatric symptoms can increase the risk of progression from a mild cognitive impairment state to dementia. Depression has been identified as a risk factor for dementia, and a depression syndrome of dementia has been identified. Even so, disentangling the two can be complicated. Reactive depression can occur as a consequence of a dementia diagnosis. Given that depression is common in older adults, occurrence of dementia with depression might occur by chance. However, common causes (i.e., cerebrovascular disease, dementia with Lewy bodies, and Alzheimer disease) can lead to both depression and dementia, and several studies have shown that depression precedes dementia.

Neuropsychiatric symptoms are common in all of the dementias. Psychosis, specifically visual hallucinations, is a core criterion for dementia with Lewy bodies and commonly occurs in Parkinson disease, where symptoms of psychosis can precede dementia or occur in the setting of dementia. Delusions, notably paranoia, are commonly seen in adults who have Alzheimer disease, and impaired insight and judgment, as well as other behavioral problems, are central symptoms of frontotemporal dementia and are commonly seen in adults who have vascular dementia.

## Difficulties

The reliance on the notion of consent as the sole justification for medical interventions creates difficulties in cases where a patient, who is thought to be in need of treatment, is unable to give (or withhold) meaningful consent [1]. For example, patients admitted to hospital unconscious, with advanced dementia, those who have suffered a cerebral vascular accident, or patients with profound intellectual disabilities will not be able to understand, retain, or use information about a proposed treatment. The influence of past and present circumstances, anxiety, and pain on a person's ability to understand, reason, and communicate a choice may be much more subtle and not easily determined in a cursory examination in the emergency department. A patient, for the above reasons or for reasons unknown, may act in ways that impede the therapeutic process, which may or may not be a genuine reflection of what they wish for.

Under these circumstances, determining whether a patient has the capacity to make the necessary decisions will be critically important. Health staff have an obligation to make it clear that failing to treat will have serious consequences and may be fatal. The ethical and legal question that arises is whether it is ever appropriate to treat patients in the absence of a valid consent and, if so, under what circumstances this may happen. To fail to intervene in the case of a patient who is apparently refusing treatment that is clearly necessary for his or her survival, health, or wellbeing could be grounds for severe criticism or even a subsequent claim of negligence. On the other hand, a paternalistic imposition of lifesaving treatment upon a patient who is able to understand the consequences of his or her refusal would amount to an unlawful assault. In the final analysis, the clinical imperative is to treat the person in a manner that is lawful, recognizing that imposing treatment may well involve judicial sanctioning to keep the person in hospital against his or her will, including using sedation and/or physical interventions to undertake investigations or give treatment.

# Diagnosis

Alzheimer's disease (AD) is the most common cause of dementia and is the primary focus of this section [4]. Dementia is a neurocognitive disorder. Dementia is defi ned as a clinical syndrome with global cognitive decline from a previous level of baseline function that interferes with activities of daily living (ADLs). In the differential diagnosis, it is important to ascertain whether an individual has cognitive impairment or

an illness with similar or overlapping signs and symptoms such as delirium, depression schizophrenia, bipolar disorder, or other neurological disorder. If there is cognitive impairment, then developmental delay, borderline intellectual functioning, mild cognitive impairment, and other related diagnoses must be ruled out. To meet the criteria for minor or major neurocognitive disorders according to the DSM-5, cognitive decline must be in at least one of the following cognitive domains including "complex attention, executive function, learning and memory, language, perceptual motor or social cognition". Once dementia is ruled in, the type of dementia can then be determined.

Clinicians must consider normal aging processes and factors that may contribute to the overall clinical picture when assessing a patient who presents with signs or symptoms of dementia. AD has a gradual onset, and the course of illness and progression is typically slow. The duration of AD ranges from 3 to 20 years and averages 10 years as comorbidities complicate the course of illness. Symptoms vary from person to person, and cognitive deficits cause significant impairment in social and occupational functioning, impaired ability to care for oneself, and altered behavioral patterns. Signs and symptoms progress from memory loss to impaired executive functioning, language deficits, coordination, and perception with total or partial loss of the ability to recognize familiar people or objects. Impairment in memory and learning (amnestic) is the typical presentation for AD and neuropsychiatric symptoms almost always occur.

## Care

Dementia is one of the leading causes of disability and dependency for older adults worldwide [5]. Approximately one half of those in need of caregiving have dementia. In the next decade, the US will need 1.3 million more paid caregivers. The approaching need, combined with the caregiver shortage that already exists, will present care challenges that could place an even larger burden on the shoulders of informal caregivers. Informal caregivers are family or relatives, mostly female, who provide unpaid care and support. Informal caregivers face financial, emotional, and physical strain. They are more likely to experience physical health problems, depression, and anxiety. Some are forced to leave the workforce. Sixtyeight percent of family caregivers in the US reported that they had to make work accommodations including retiring, working part-time, or taking time off.

Informal caregivers provide the bulk of dementia care. Thirty-four percent of the informal caregivers in the US are 64 or older. Dementia care exceeds the demands of many other chronic conditions. Those with dementia require more assistance with activities of daily living and can exhibit emotional behaviors that are unfamiliar and difficult to manage. Most informal caregivers are not prepared, nor do they have the training for the tasks needed to provide the necessary care. With the progression of the dementia, the person living with the condition requires increasing levels of assistance to complete everyday bodily tasks [6]. Some people simultaneously lose their awareness of the need to get up and keep clean. Although staying in bed and refraining from washing is possible for some days, doing so for longer may come to harm one's health and well-being. Therefore, accomplishing the tasks of getting residents up and washed falls to care workers. This sometimes results in situations in which residents refuse to get up, do not want a shower or want to wear their favourite shirt while their care worker finds it too dirty to wear. Studies on care work have pointed out that care workers often call residents who do not want the same as themselves in activities of daily living (ADL) care encounters 'difficult' or exhibiting 'challenging behaviour'. But they frequently stop short at unpacking how this encounter plays out when it presents itself. To want something is an expression of subjectivity, and being respected in one's desires is as much part of living a good life in a dementia care home as it is elsewhere. But how can we think about what residents want in cases which lead their care workers to assert that what a resident wants is not good for her? Indeed, if care were just about 'getting the job done' then the way it is done would not be relevant.

# **Palliative Care**

Careful assessment and knowledge of the patient's wishes are essential requirements in planning care for the older patient [7]. However, older patients with a life-threatening illness may also have to contend with other age-related chronic conditions such as arthritis, hypertension, diabetes, dementia and cardiovascular problems, all of which may have taken their toll on the older person's general health, prior to the onset of their present illness. Add to this their possible difficulties with hearing and visual impairments, general frailty and reduced ability to perform the daily activities of living (cooking, cleaning, self-care, etc.) and it is clearly evident that the older patient may require considerable support during their final illness. The role of the community palliative care clinical nurse, in conjunction with the primary health care team, is to offer support to these older patients and give them an opportunity to express their emotions, discuss their symptoms and assess where help of a practical nature is required.Older patients may also be concerned about the effects of their illness on the elderly spouse who may be caring for them. This creates a unique situation where the spouse, as well as the patient, may be in need of practical care and support. The community palliative care clinical nurse specialist can provide information to the elderly couple regarding care options and offer reassurance that their wishes will be taken into consideration. As mentioned previously, many elderly are quite isolated as extended families no longer live in close proximity, and changing demographics show that as people grow older in today's society, more of them live on their own. This can result in isolation and loneliness for many elderly patients. The community palliative care clinical nurse specialist can offer time and expertise to elderly patients, ensuring that their needs are addressed and their preferred place of death is made known to the other members of the health care team. Death remains just as fearful to the older person as it is to the younger patient, and although more support may be necessary, the elderly can achieve their wish to die at home if desired.

Should patients in their final stages of AD be admitted to the hospital and/or given antibiotics when there is an acute illness or infection [8]? These are important issues that doctors should discuss with families as part of "goals of care." If it is decided that the "goals of care" should focus solely on comfort, then in the setting of most acute illnesses the person should be made comfortable at home or in the nursing home without admission to the hospital. This is because hospitalization for older patients, particularly those with cognitive impairment, can be hazardous. These hazards include delirium, pressure sores, functional decline, new incontinence, and nosocomial infections. Another issue for individuals with advanced dementia and a public health concern is the use of antibiotics for acute illness. Data suggest that survival is enhanced for patients with end-stage dementia receiving antibiotics for a febrile episode is limited. Additionally, negative consequences for individuals receiving antibiotics can include: the pain of intravenous line placement, infection and blood clots at intravenous line sites, clostridium difficile infection (c. difficule causing diarrhea or colitis, allergic reactions, increased use of invasive tests, and increased use of mechanical restraints to prevent the patient from removing the intravenous line. The final palliative care element, and possibly the most important, for patients with dementia is the adequate management of pain. The prevalence of pain in several nursing home populations, in which the vast majority of patients are cognitively impaired, has been reported to be as high as 45% to 80%. Advanced dementia patients received one-third the amount of opioid analgesia as compared to cognitively intact subjects-40% of whom reported severe pain postoperatively. This suggested strongly that the majority of dementia patients were in severe pain postoperatively. Of note, only 24% of patients with end-stage dementia and hip fracture received a standing order for analgesics. This is a serious issue for healthcare planners, administrators, and providers alike.Barriers to

adequate pain control in patients with dementia are multifold and include: limited ability to communicate, presence of multiple pain problems, increased sensitivity to drug side effects, and lack of physician education in regard to pain management. The consequences of inadequate pain control include: sleep disturbances, behavioral problems, decreased socialization, depression, impaired ambulation, and increased health care use and costs.

#### Nursing

The definition of the behavioral changes in dementia from the perspective of nursing science has to take into account the specific nursing focus on the caring situation [2]. The nurses' objective is the realization the particular care task, taking into account the personal situation and needs. Success is achieved when the nursing goal (sufficient food, body care, meaningful occupation) is achieved together with the person in need of care in mutual satisfaction. Against this background, changes in behavior are understood as complex situations and the core reason for the behavioral presentation lies in the interpersonal context. The understanding of those situations requires consideration of different perspectives, in particular the perspective of those in need of care and those directly involved in the situation (professional carer or relatives). The triggers for behavioral changes can be the personal factors of the person with dementia itself (health status, personality and lifestyle) and factors from the physical and social environment. The requirement for dealing with the behavior of the person with dementia is the understanding of its function. This process of understanding of the behavior need to be systematically resulting in a common understanding of the situation, common goal setting and common handling of the situation.Dementia causes both cognitive and language deficits [9]. The older person suffering from dementia has no control over these changes, so the responsibility for effective communication rests with the nurse. Depending on the severity of the dementia, the individual may demonstrate different levels of function. The abilities and limitations of each individual suffering from dementia must be evaluated, so that the most effective interactions can be planned. Some characteristics of dementia include a limited attention span, inability to focus on more than one thought at a time, confusion of fact and fantasy, and the inability to follow complex instruction. According to the Alzheimer's Association, "For persons with dementia, behavior is frequently a form of communication." Problems with communication can result in agitation, restlessness, abusive language, or combativeness. Repetitive vocalizations, urgency, and change in tone or pace of speech can indicate an unmet need, even when the sounds are meaningless. Try to determine the meaning of the behavior, not ignore it as meaningless.

#### Treatment

Patients found to have reversible causes of dementia should receive prompt and appropriate treatment [10]. For example, those with depression should be started on antidepressants and re-evaluated for cognitive improvement. However, because dementia is most often irreversible, the focus is to maintain quality of life and maximize function. Patients and their caregivers should be educated about creating a safe, familiar, and nurturing environment for the patient; managing behavioral problems; and treating comorbid conditions that may exacerbate cognitive decline. If disruptive behavior persists after optimizing function and using behavioral strategies, the atypical antipsychotics such as quetiapine (Seroquel) are the preferred agents to help control behavior that presents a risk to the patients or others. Phenothiazines (e.g., haloperidol, risperidone) and anticonvulsants are occasionally needed to control disruptive behavior. Since cognitive impairment may be exacerbated by the use of psychoactive medications such as tranquilizers, sleeping pills, anxiolytics, and drugs with anticholinergic activity, they should be used cautiously with careful dosage titration and periodic reassessment of both their indication and dosage. Side effects also include an increased incidence of falls, increased sedation, and-in the case of the phenothiazines—tardive dyskinesia. The dosage and continued use of psychoactive medications should be monitored.

# Conclusion

People usually call dementia senility; it is a gradual deterioration of intellectual abilities all the way to impairment of social and work functioning. The most prominent symptoms are memory difficulties, especially recent events. Other symptoms are poor judgment - the person has difficulty understanding personal situations, planning or making decisions, people lose their own standards and control over urges, the ability to think abstractly declines, emotional disturbances are common, including too little affect and occasional emotional outbursts. The course of dementia can be progressive, static, or it can occasionally recede, depending on the causes. Over time, many sufferers become apathetic and withdrawn, and in the terminal phase the person loses the integrity and liveliness of the personality, and does not notice the environment. The most common cause of dementia are cerebrovascular diseases that interfere with blood flow to the brain. Dementia is a disorder that mostly occurs in older people, and since these are people who are not working (and often not intellectually) active, the initial symptoms may go unnoticed. The sufferer rarely notices or denies his increasing limitations. On the other hand, the environment replaces them with benign senile forgetfulness, and there is a common and misconception that intellectual decline and increasing dependence on the environment are normal consequences of aging. Such persons come to the doctor (or bring them) only when behavioral disturbances, aggression, a tendency to wander, and nocturnal restlessness occur.

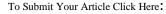
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