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BEHAVIORAL MANAGEMENT IN THE PERSON WITH DEMENTIA

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The early recognition of cognitive impairment is imperative, as cognitive changes are often associated with a variety of behavioral changes (1, 2). Many persons with amnestic mild cognitive impairment (MCI) often develop depression which can aggravate the cognitive impairment (3, 4). Persons with Alzheimer's disease often have concurrent apathy and/or depression (5-7). Behavioral disorders account for 11% of hospitalizations in persons with dementia (8-10). Early recognition of these occurrences and referral to a geriatrician is an essential component for the appropriate early management of the individual (11-16). For this reason, it is essential to increase awareness of the general practitioner and their ability to diagnose both early cognitive impairment and depression (17, 18). Both the Montreal Cognitive Assessment (MoCA) and the Saint Louis University Mental Status (SLUMS) examination are useful tools for diagnosing MCI (19,20). The Patient Health Questionnaire-9 (PHQ-9) is replacing the Geriatric Depression Scale as the diagnostic test of choice for depression, particularly as the MDS 3.0 has developed a validated version that can be used in cognitively impaired individuals (21, 22).

An important behavioral change in persons with dementia is the alterations in feeding behavior (23-26). Early on there may be an increase in food intake, but as the dementia progresses persons with dementia classically become anorectic and lose weight (27-29). Screening with the Mini Nutritional Assessment (MNA) to allow early intervention is essential (30-34). Alzheimer's patients often develop paranoia and may perceive that they are being poisoned (35). Other treatable causes of anorexia should be explored in all persons with dementia who are losing weight (36). Caloric supplements between meals, as well as access to enjoyable finger food are an important approach to maintain weight (37, 38). Day care at green care farms helps to maintain weight (39). In the United States tube feeding is over utilized in persons with dementia (40). A person with dementia can take up to 45 minutes to feed (41). Persons with depressive symptoms are at extremely high risk of weight loss (42-45). The loss of weight in demented patients increases the chance of them developing frailty (46-50). Frailty can accelerate cognitive decline (51-54, 56-58). When frailty is combined with dementia, the risk of all cause mortality is increased (59).

Changes in sleep behavior commonly occur with dementia (60, 61). Persons with Alzheimer's disease tend to have phase advancement, resulting in being awake at night when others are normally going to sleep (62). Bright light (2000 lux) given in the morning can reverse this abnormality and can reduce agitated behavior (63). Sleeping abnormalities, especially sleep apnea, have been associated with rapid cognitive decline (64, 65).

A number of neuropsychiatric symptoms are seen in dementia. These include psychotic symptoms (such as hallucinations, delusions, illusions and paranoia) and hyperactivity (aggression, mania, agitation, irritation), besides the depressive/anxiety type behaviors. These behaviors are present in over two-thirds of residents with dementia in the nursing homes (66).

Disinhibition is another behavior that is common in persons with dementia, especially those with Lewy-Body dementia. Disinhibition often leads to abnormal sexual behaviors (67). Public masturbation, sexual aggression to others and inappropriate verbal sexual comments are all not rare in the demented person. Use of progestagenic drugs to treat sexual behaviors is not recommended because of the high propensity to cause deep vein thrombosis (68).

Persons with dementia are at high risk of developing delirium (69-72). Changes in behaviors need to be recognized early and the patient carefully examined for treatable causes with delirium (73). Management of delirium requires high quality of nursing, and avoidance of physical and chemical restraints (74-77).

Pain is very common in older persons (78-80). Persons with dementia cannot always communicate that they are in pain. Appropriate pain medication should be instituted in any agitated person when it is uncertain whether or not they are in pain. Memantine has been shown to have a small effect on agitated behavior in some but not all studies (81). It is possible that this effect is due to its ability to block NMDA glutamate receptors. There is increased activity of the NMDA glutamate receptors in persons with chronic pain and blocking these receptors has been shown to reduce pain (82).

Cholinesterase inhibitors have been reported to decrease agitated behavior, but the quality of these studies has been variable (83, 84). These drugs also slow cognitive decline, but the clinical significance is small (85). There appears to be a subset of individuals who have much better responses to cholinesterase inhibitors, than do the majority of demented individuals.

Antipsychotic medications should be used in persons with hallucinations, delusions, illusions and paranoia as well as in those with documented schizophrenia or other psychoses. Antipsychotic medicines have not been shown statistically to improve difficult behaviors in other demented individuals (86). In persons with dementia, besides producing tardive dyskinesia, acute dystonia and Parkinson's like symptoms, antipsychotics increase mortality, stroke, myocardial infarction, diabetes

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mellitus, cataracts and hip fractures (87-90). For these reasons antipsychotics should be avoided in persons with dementia.

Exercise has been shown to slow cognitive decline and improve function in persons with dementia (91-93). A number of studies have shown that both aerobic and resistance exercise reduce episodes of agitated behavior (94-97). Exercise is as effective as pharmaceutical agents and behavioral therapy in reducing depression (98). In addition, exercise improves sleep (99, 100). All persons with dementia should be enrolled in an exercise program for 30 minutes at least 3 times per week.

In many cases agitation is precipitated by well meaning gestures from family or staff that are misinterpreted by the demented individual. Taking persons with dementia to a novel environment can be very stressful and precipitate agitated behaviors (101). There is increasing evidence that structured behavioral therapy can improve functioning and decrease agitation in older persons with dementia. Cognitive Stimulation Therapy has been shown to improve memory and self-reported quality of life and well being (102-104).

Resistiveness to care is a particular problem in dementia, especially in the nursing home settings (105). A resistiveness to care scale has been developed and can be helpful in recognizing persons who will need a focus on this problem among the nurses' aides providing care for the individual (106). Caregiver singing has been found to reduce resistance to care in one small study (107). Use of low doses of short acting benzodiazepines may be necessary to help overcome the resistiveness.

Excessive continuous vocalizations are occasionally present in persons with dementia. Behavioral modification using a hearing amplifier to provide feedback to the individual is occasionally useful. This behavior is considered by some a form of depression and it has been found to respond to electroconvulsive therapy.

Sundowning is increased confusion or restlessness that occurs in the early evening in persons with dementia (108). There are many potential causes and identification of the cause is often the solution to the problem. As previously noted, alteration of circadian rhythm is persons with dementia can lead to an increase in activity later in the day. Shadows can produce illusionary objects that can be disturbing to the demented person, particularly if they have visual disturbances. Hunger, hypoglycemia, hyperglycemia and postprandial hypotension can all trigger agitation around the mealtime (109, 110). Fear of darkness can also trigger behavioral problems.

There are numerous different causes of behavioral problems in older persons with dementia. Identifying the cause of the problem is essential to appropriate management. In general, exercise and behavioral therapies are preferable to pharmacological approaches to the management. All older persons with end stage dementia and difficult behaviors should be enrolled in an end-of-life or hospice program to help enhance their quality of life (111-114). As proposed by the IAGG/WHO position paper on nursing homes there is a high need for research and education on behavioral interventions for agitated behavior (115, 116).

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