

Effects of alzheimer's and risk factors



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Alzheimer's disease (AD) is a chronic degenerative disease process that is currently affecting upwards of 5.3 million people in the United States (Alzheimer's Association, 2010). This disease can cause physical and mental hardships on not only the client but on caregivers alike. In the following paper we will discuss the disease process including causes and risk factors, the effects on the client's activities of daily living, the challenges with social, family, spiritual and cultural life, disease prevention and treatment along with long term management, and lastly, nursing care and interventions that can facilitate the life of a client with Alzheimer's. Because the disease results in cognitive impairment, psychological effects will be referred to throughout the paper.

In order to grasp the needs of a client with Alzheimer's disease, we must first understand the disease process itself. According to Mosby's Medical Dictionary Alzheimer's disease is defined as, "a condition characterized by progressive mental deterioration" (2009). As individuals age numerous variations in the brain occur. Some of these changes include a decrease in brain size, deterioration of the cerebral cortex, and a loss of neurons that is dramatically hastened in the patient with AD. A decline in production of acetylcholine, norepinephrine, dopamine and serotonin is common in patients with this disease (Ignatavicius & Workman, 2010, p. 970). These things can subsequently cause brain cell death which leads to rapid memory loss (Mayo Clinic, 2011). There is inconclusive evidence on where the impairment occurs when processing information in the brain. A recent journal article, published in Brain Imaging and Behavior, comments on this ongoing mystery and writes, "[It is unknown] whether the memory impairment results

from failure of encoding, consolidation or the retrieval mechanism” (Blacker, O’Keefe, O’Brien, Pihlajamaki, & Sperling, 2011. p. 37). The etiology of AD is unfortunately still unidentified. It is known, however, that people with this disease actually do have a smaller amount of living brain cells than a person without the disease. Connections in the brain are also diminished and cannot transmit as easily (Mayo Clinic, 2011). Professionals have speculated many risk factors that they think contribute to a diagnosis of Alzheimer’s disease. The two most important factors include an age over 65, and being of the female gender. However, genetic factors, chemical imbalances, being of an African American descent, lower educational level, environmental agents (such as viruses like herpes zoster, herpes simplex, exposure to zinc and copper), and immunological changes are all also potential causes (Ignatavicius & Workman, 2010, p. 970).

AD is easily identifiable by its signs and symptoms which manifest in different stages. There are three stages that occur. The first stage is the early onset of Alzheimer’s in which patients will have simple forgetfulness and often will deny that there is a problem, resulting in seclusion. Stage two is progressively worse; the patient will soon become disoriented to time, place and events. In this stage incontinence as well as speech and language become problematic for the patient. The patient begins to become progressively more embarrassed and agitated. In the final stage, or stage three, the patient is no longer able to care for him or herself and is often unable to verbalize needs or able get out of bed without assistance (Ignatavicius & Workman, 2009, p. 971-972). This stage of Alzheimer’s significantly affects patient’s activities of daily living. Simple tasks such as

brushing teeth, combing hair and changing clothes are impossible for the patient to do. Because of their self-care deficit, the patient's family may have to provide personal cares along with ADL's and psychological reassurance. This can cause both emotional and financial stress for the family. Forgetting people's names or faces can have a debilitating effect on a patient's social life. Patients will often have little to no social etiquette demonstrated by screaming obscenities, playing with their own fecal matter and other aggressive behaviors as an example. Sleep patterns are often disturbed and patients usually take frequent naps during the day and are active at night (sundowner's syndrome). This disrupts the patient and his or her family's daily routine (Ignatavicius & Workman, 2009, p. 973).

This type of diagnosis could likely affect their cultural beliefs as well. For example, cultures, such as Hispanic, strongly believe in elder respect and taking care of the elderly. Extended family will often live under one roof. For these cultures a patient with AD may become more of a burden to the whole family rather than a culture that might accept assistance from a nursing home or assisted living center. Spiritual life can also be affected. The client may no longer be able to go to religious services due to their potential social inappropriateness or because the family may have to closely accompany them. The client may forget, or find it unnecessary, to partake in practices that they previously carried out. This may make the client and family feel very frustrated.

Whereas there is no known way to prevent AD, there are many interventions to prevent the complications associated with the disease. Since memory impairment is the main symptom of Alzheimer's the client is expected to be

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very confused and disoriented. The nurse should be prepared to answer all the patient's questions truthfully and keep him or her oriented by possibly providing single date calendars and keeping them on a non-changing routine. These things will help them to become more comfortable in their environment and be familiar with what is going to happen (Ignatavicius & Workman, 2010, p. 975). Validation therapy is one way that health care providers can achieve both of these goals. This therapy entails the staff member recognizing the patient's feelings and concerns without lying to them or dismissing the fear. For example if the client has already eaten breakfast, and returns to the dining hall expecting a second breakfast, an appropriate response from the nurse would be something along the lines of, " I notice you are still hungry, I will get you another piece of toast". It would be inappropriate for the nurse to tell the client that he or she has already eaten because this may cause the client to become very agitated. The response does not dispute the client, but it also does not support the idea that he or she has not eaten breakfast (Ignatavicius & Workman, 2010, p. 975). Caregivers should also promote self care management. Sustaining independence in the client's ADL's is very important for the client with AD and can sometimes help to prolong self physical management. The nurse will also need to instigate bowel and bladder programs. It is important that these clients are toileted every two hours and as needed. Incontinence can be very embarrassing for the client and anything the staff can do to prevent this is encouraged. Staff should keep the client well hydrated and may need to remind the client to drink often. If on a 2 hour and PRN schedule the client is less likely to acquire an injury by trying to get up and go to the bathroom on their own. Next, it may be helpful to regularly take the client on walks and to

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provide them with something to do. Be sure to minimize stimulation and ensure safety. As for long term management of the disease it is likely that the client will eventually need to be placed in a long term care setting such as assisted living. Interestingly enough, in a journal article from The International Journal of Geriatric Psychiatry it states that recent evidence suggests that behavioral interventions and techniques are more effective than any other means of care including pharmacological approaches. They affirm that staff should be well trained to deal with these clients and that they play a huge role in the client's overall disposition and how he or she will cope with managing their disease (Ayalon, Arian, Bornfeld, & Beard, 2009, p. 118-123). For some psychological management, caregivers should promote memory training and assist with facial recognition. It is important that they use redirection techniques and promote effective communication that has been tailored to that client specifically (Ignatavicius & Workman, 2010, p. 974-978). Alzheimer's disease is very complex and has many components to successful nursing interventions, but when followed can lead to great results.

Two creative nursing interventions that we were able to come up with are (Pts. with AD should be involved in social interaction to decrease feelings of boredom, anxiety and decreased self-esteem. A possible intervention the nurse can use to help a pt. with AD is to encouraging the pt. to sing with others and help pick out music; this can possibly improve the pts. mood and behavior. It is believed that listening to enjoyable music during routine activities can decrease agitated behavior. Fun activities such as playing musical instruments (triangle, maraca or even a toy hand drum) can be easy

for the pt. to do and also entertaining.) I am not sure what to do about the other one but with my grandpa we used to put a picture on his door to help him remember what room was his, but that kind of similar to what we talked about above.

By 2050 it is expected that the prevalence of Alzheimer's disease will increase to 14 million people (Ignatavicius & Workman, 2010, p. 970). As healthcare providers it is important that we educate ourselves on this disease because it is nearly inevitable for anyone of us to avoid caring for a client diagnosed with it. In this paper we discussed the disease process including causes and risk factors, the effects on the client's activities of daily living, the challenges with social, family, spiritual and cultural life, disease prevention and treatment along with long term management, and lastly, nursing care and interventions that can facilitate the life of a client with Alzheimer's disease.