Managing Agitation and Aggression in Patients with Dementia

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Abstract

Dementia is a degenerative progressive disease that leads to multiple behavioral disturbances particularly behaviors of agitation and aggression. Risperdal is the most common antipsychotic agent used in patients with dementia experiencing these behaviors, however, there are associated risks with it use. There are non-pharmacological interventions to medications that can be beneficial and pose no risk in the management of agitation and aggression. The research reviewed demonstrated evidence that non-pharmacological interventions should be used prior to antipsychotic medications. Some interventions currently being used are aromatherapy, doll therapy, and music therapy. The caring theory suggest that the approach to caring is the care giver's ability to provide person centered care. Caring for dementia patients with agitation and aggression has to focus on the whole patient and treat the triggers that cause the problematic behavior. The advanced practice nurse should not pursue a single method and is entrusted with assessing the patient and including what works best for the patient, family and caregiver.

Keywords: Dementia, agitation, aggression, Risperdal, Non-pharmacological interventions, aromatherapy, doll therapy and music therapy.

Managing Agitation and Aggression in Patients with Dementia

Dementia can be defined as a mental health disorder that can affect memory and cognition in any age. Dementia is a progressive neurodegenerative disease that also leads to multiple behavioral disturbances mostly seen in elderly patients (Kazuyo, Hideko, & Jinichi, 2015). These disturbances can lead to a poor quality of life and can cause physical symptoms, such as loss of independence, decrease in appetite, bowel and bladder incontinence, and decreased awareness of environment. The physical symptoms are concerning, but the psychological and behavioral symptoms can be more distressing to patients, families, and caregivers (Rue-Chuan et al., 2013). Of particular concern are the behaviors of agitation and aggression. Physical behaviors can become a safety hazard for the patient themselves, staff, as well as those around them. In addition, patients may refuse care, medication, or food leading to health concerns. Interventions to manage agitation and aggression have traditionally focused on the use of antidepressants, antipsychotics, anxiolytics, and hypnotics. Health care providers continue to prescribe second generation antipsychotics (SGA). Risperdal is the most common antipsychotic agent prescribed to the elderly population experiencing behavioral disturbances, such as agitation and aggression, secondary to dementia, as suggested by multiple studies (Jackson, Scchneeweiss, VanderWeele, & Blacker, 2014; Shin et al., 2013; Vasilyeva, Biscontri, Enns, Metge, & Alessi-Severini, 2013). However, there are associated risks with the use of Risperdal, such as stroke, ventricular arrhythmias, venous thromboembolism, myocardial infarction, hip fracture, and pneumonia. Despite these risks, Risperdal continues to be the mainstay treatment over any other pharmaceutical option (Jackson et al., 2014; Shin et al., 2014 & Yang et al., 2015).

Recent evidence suggests that non-pharmacological interventions have been beneficial in treating behavioral disturbances in dementia patients (Rue-Chuan et al., 2014; Shin et al., 2015).

These interventions carry less risk and may be considered prior to prescribing Risperdal (Ijaopo, 2017; Douglas, James, & Ballard, 2014; Tampi, Tampi, Balachandran, & Srinivasan, 2016). Some of these interventions include aromatherapy, do11 therapy, and music therapy. It is suggested by the Centers for Medicare and Medicaid (CMS), that medications should only be considered when all social, psychosocial, environmental, functional, medical, physical, emotional, and psychiatric causes of a patient's behavioral symptoms have been addressed (CMS, 2013). The purpose of this integrative literature review is to explore the effects of both pharmacological and non-pharmacological treatments for aggression and agitation in patients diagnosed with dementia. This leads to the PICOT question: In patients with dementia, what is the effect of non-pharmacologic interventions compared to Risperdal for management of agitation and aggression?

Methodology

To begin to identify current evidence on this integrative review on elderly patients with dementia in long term care settings receiving Risperdal as compared to non-pharmacological interventions for agitation and aggression, the school search engines Cumulative Index of Nursing and Allied Health Literature (CINAHL) was employed at the school library. Google Scholar was also used in addition to PUB- MED. The school database was searched for peer-reviewed original articles published between 2013 and 2018. Key words searched were: *Risperdal, elderly, dementia*; *non-pharmacological intervention, quality of life, music therapy, doll therapy, aromatherapy, agitation,* and *aggression.*

Many articles were found initially on pharmacological intervention to treat agitation/ aggression in dementia patient and the outcomes of that intervention (DeBellis, Bradley, Xiao, Belan, & Wallace, 2015; Jackson et al., 2014; Shin et al., 2013). Other studies found were on

risks of the use of these interventions, more specifically first and second generation anti-psychotics (Shin et al., 2013; Vasilyeva et al., 2013). Unfortunately, many articles found were outdated, not only by date, but also by old forms of treatment choices, therefore these articles were excluded. By date alone, the number of studies were reduced to 23.

In order to find more statistical data and quantitative data on the disease of dementia and its symptoms of agitation or aggression, the search was expanded to include keywords such as *dementia treatment worldwide.* This was useful in identifying articles that viewed intervention for management of agitation and aggression from multiple culture perspectives (Shin et al., 2013). Finding articles on family perspectives and involvement was more difficult, as there was limited research done on this topic. An article had to be requested from the school website from an alternative source (Jinichi, 2015). Many qualitative articles pertaining to a patient's behavioral symptoms were included as well. Lastly, articles were obtained on non-pharmacological interventions including aromatherapy, doll therapy, and music therapy (Douglas et al., 2014; Kazuyo et al., 2015; Shin et al., 2013). In order to determine whether an article was relevant to this integrative review, every article's abstract was read, and those not related to the focus of this review were excluded. Therefore, 14 studies were selected after exclusion of outdated studies and searching for evidence on aromatherapy, doll therapy, and music therapy.

Theoretical Framework

Jean Watson's caring theory served as the theoretical framework of this scholarly research paper. The theory of human caring developed by Jean Watson focused on the relationship between the nurse and the patient (Watson, 1979). The philosophy of care examines the relatedness of human sciences, caring processes, experiences, and phenomena. Watson's theory is a perfect blend of the sciences and humanities. Watson 1979 uses what she calls the ten

carative factors to describe the nursing-caring transaction that takes place within that moment when care occurs. This is in contrast to medicine's curative approach, which focuses on medicine as it relates to health giving treatments and the healing process. The ten carative factors include: humanistic-altruistic system of values; supporting faith/hope; sensitivity to self and others; forming a helping-trusting caring relationship; encouraging the expression of feelings and emotions; creating an individualized problem-solving process; promoting teaching-learning; preserving human dignity by helping with basic human needs; and providing spiritual support (Watson, 1979).

This theory is important to the current research question because as dementia progresses and patients decline, care must be directed to patients' immediate needs. As behaviors can interfere with basic needs, it becomes imperative that behavioral issues are addressed first. Watson's theory speaks directly to individualized care for the patient and meeting their primary needs, which may lead to improving the patient's quality of life. This theory is relevant in the care of the patient by the clinical team in deciding what intervention is best for treating patients and least harmful, as well as care given to patients by family members and caregivers at the bedside.

Critique of the Literature

Qualitative Studies

Credibility, transferability, dependability and confirmability were critiqued in the qualitative studies reviewed (De Bellis et al., 2017; Backhouse, Killett, Penhale, Burns, & Gray, 2014). These criteria let us know if the findings are trustworthy (Ryan, Coughlin, & Cronin, 2007).

De Bellis et al. (2017) used 10 semi-structured face to face interviews regarding relatives' and caregivers' perspectives on the use of antipsychotics for behaviors of agitation and aggression in patients with dementia. Relatives and caregivers were interviewed by the researcher using open-ended questions, which were audio taped and responses were documented. Data was also collected through direct observation of the patients. These two methods used to collect data demonstrate triangulation by producing understanding of agitation and aggression in dementia patients. This technique also ensures rich and robust data (Lincoln & Guba, 1985). Researchers also cross-checked and analyzed data for common themes to established trustworthiness of the data. The study results provided "*thick description*," which provides sufficient details and includes direct quotations from participants to describe the phenomenon ("Are the behaviors happening because of the disease or is she medicated?" (p. 28), for example). This also allows for conclusions to be transferable to other times, settings, situations and people (Lincoln & Guba, 1985). The study (De Bellis et al., 2017) reported that data saturation was achieved after six interviews. This added strength to the study, as data was adequately explored and no new themes or perspectives were emerging.

In a study on the management of behavioral symptoms in care homes in four counties in East England, data was gathered through mailed questionnaires to home care managers specializing in caring for patients with dementia (Backhouse et al., 2013). There was a high return rate of the questionnaires with 299 responses, which is a strength to the study and can offer depth of information on the phenomenon (Lincoln & Guba, 1985). The research reported a common theme in their findings, namely, that all facilities used both pharmacological and non-pharmacological interventions to manage aggression and agitation. A limitation of this study was that surveys were completed by nurse managers, who may have been subject to a fear of

portraying suboptimal care. This may influence the believability of the study (Ryan et al., 2007). Also, it is unclear how much their particular perspective may have influenced the treatment modalities for agitation and aggression (Backhouse et al., 2014). All of the qualitative studies reviewed (De Bellis et al., 2017; Backhouse et al., 2014) stated that informed consent was obtained prior to information gathering on the patients, thus protecting the patients' right to accept or decline participation (Ryan et al., 2007). The studies did adhere to fundamental moral principles, confidentiality, and anonymity. Willing participation by the patient, family, or responsible party would increase the likelihood that the studies would be completed with honesty and the results would be trustworthy (Lincoln & Guba, 1985).

Quantitative Studies

The quantitative studies included in this integrated review were critiqued for credibility and integrity and that the concepts studied were measured in an unwavering and constant way (Rue-Chaun et al., 2013; Ryan et al., 2007). (Rue-Chaun et al., 2013) conducted a cohort experimental study that included 104 older men with dementia living in two veterans' home in Taiwan. A cohort is a type of longitudinal study that observes participants over a period of time to assess long term effects (Grove, Gray, & Burns, 2015). This study examined the benefits of non-pharmacological interventions in dementia patients with symptoms of agitation and aggression. It consisted of a control and experimental group. A benefit of a control group is that results can establish efficacy of the experiment being explored (Grove, Graves, & Burns, 2015). (Rue-Chaun, et al., 2013) study findings were statistically significance and revealed that non-pharmacological interventions decrease agitation with statistical significance ($p=0.013$).

A limitation in this study Rue-Chaun et al.' (2013) was that all participants were male subjects; however, valuable information gathered can be considered for both female and male

patients with dementia experiencing agitation and aggression in other settings. For a study to be generalizable, its results need to be relevant outside the context of the study situation (Ryan et al., 2007). Given such a homogeneous sample, it is uncertain how generalizable the results of this study are. A strength of this study (Rue-Chaun et al., 2013) was that approval was gained from two Institutional Review Boards (IRB) before research was undertaken. The role of the IRB is to determine that the rights of experimental subjects are honored and ethical principles are upheld (Ryan et al., 2007).

Arita, Suzuki, and Yoshiyama (2015) researched the use of aromatherapy on dementia patients with agitation using a randomized sample of 14 women older than 65 years living in a nursing home. This small sample size can be a limitation, as it could be overly represented within the target population (Grove et al., 2015). The researchers divided the participants into two groups, an experimental group and a control group. This increases the control and rigor of the study and decreases the potential for bias (Grove et al., 2015). The Cohen Mansfield Agitation Inventory (CMAL) instrument was used to measure agitation, however the researchers did not discuss the reliability of this tool. While the results did not reveal statistically significant findings, this may have been due to the small number of participants, which would increase the chance of type II error (Grove et al., 1997).

Synthesis of the Literature

The research was organized into three groups. One group discussed the benefits of Risperdal on agitation and aggression in patients with dementia (De Bellis, 2015; Vasilyeva et al., 2013). Another group examined the risks of Risperdal use (Jackson et al., 2014; Sultana et al., 2016). The last group of studies discussed non-pharmacological interventions being used to

treat dementia with behaviors of agitation and aggression (Douglas et al., 2014; Tampi, Tampi, Balachandran, & Srinivasan, 2016; Yoshiyama et al., 2015).

Benefits of Risperdal Use

Studies on the use of medication, such as Risperdal discussed the history of the treatment of behavioral symptoms and how Risperdal became the drug of choice (De Bellis et al., 2015; Jackson et al., 2014). The evidence demonstrated that Risperdal showed a positive benefit in the control in aggression and agitation with minimal side effect in low doses. Better control over these symptoms can help avoid other common symptoms of dementia, such as difficulty sleeping, depression, anxiety, and apathy. This contributes to a better overall quality of life for patients by encouraging independence as well as minimizing the risks of caregiver burden (De Bellis et al**.,** 2015; Joranson, Pedersen, Rokstad, & Ihlebaek, 2016; Xiao-Jing et al., 2012).

Risks of Risperdal Use

Although Risperdal continues to be the most popular anti-psychotic medication used to treat behavioral symptoms of dementia in the elderly, negative effects and adverse events occur with use. Three particularly serious side effects include movement disorder extra-pyramidal symptoms (EPS), ischemic stroke, and myocardial infarction (Shin et al., 2013; Vasilyeva et al., 2013). One study reviewed showed evidence of the elderly experiencing increased morbidity, cerebral vascular accident CVA's, and over-sedation (Rue-Chuan et al., 2013). The literature did not take discuss medications tapers or dosage changes. It may be for caregivers and clinicians to distinguish which behaviors are actually dementia symptoms and which ones are side effects of the use of the medication.

Non-Pharmacological Interventions

The third group of articles studied alternatives to medication, namely non-pharmacological interventions (Rue-Chaun et al., 2014; Shin et al., 2015). This included several studies suggesting the use of non-pharmacological interventions as being more beneficial to patients than medications. These interventions included aromatherapy, doll therapy, and music therapy (Kazuyo et al., 2015; Rue-Chuan et al., 2014; Yoshiyama et al. 2015). While all of these studies showed some kind of benefit to the patient, the measurement of the benefits varied. Some studies, examined the effects of the therapy on decreasing behaviors, such as aggression and agitation (Rue-Chuan et al., 2014; Shin et al., 2015). The studies suggested that a more calming demeanor was observed in some patients whereas some showed no improvement. Health care providers must be able to identify when pharmacological interventions are in the best interest of the patient. As further treatments are discovered, it becomes important to stay well informed. It is also crucial to the outcome of treatment that family and loved ones stay involved.

Aromatherapy

Aromatherapy consists of the administration of scented oils either by a diffuser, a patch, or a cream to induce a calm or positive effect Ijaopo, 2017; Kazuyo et al.,2015;). It has been demonstrated to be most helpful in decreasing the incidence of agitation and aggression. It is also an accessible alternative treatment for caregivers because it is low-cost and takes little time to implement (Kazuyo et al., 2015). One study suggests that aromatherapy is non-invasive, has less adverse effects compared to Risperdal and it does not pose any ill effects (Yang et al., 2015).

Doll Therapy

Doll therapy can be beneficial for dementia patients as suggested by attachment theory (Shin et al., 2013). Doll therapy is thought to bring back memories of parenting, promote feelings of calmness and competence, enhance stimulation through touch, improve

communication with others, and decrease agitation/aggression. This may also improve self-esteem with activities of nurturing, holding, and singing lullabies, thereby bringing elderly adults to a time when they felt secure, resulting in a calming effect. Some family members may view this type of therapy as degrading or child-like, as it is seen as a juvenile activity (Pezzati et al., 2014; Shin et al., 2013). Staff need to educate family members on the benefits of doll therapy prior to initiation and be involved in the care plan so that the family is not taken off guard, but rather can be a support in the therapy to the patient.

Music Therapy

Several studies have shown that music therapy is extremely beneficial to those with dementia (Doughlas et al., 2014; Pezzati et al., 2014; Zhang et al., 2017). One study suggested that music therapy was the most effective non-pharmacological intervention in decreasing agitation and aggression in dementia patients as compared to aromatherapy and doll therapy (Zhang et al., 2017). The therapy may include engagement in a musical activity, singing, playing an instrument, or simply listening to a song or music. Benefits from music therapy have included relaxation, reduction in agitation, decrease in aggression, better social interaction, improvements of autobiographical memory, and increased levels of well-being **(**Zhang et al., 2016**).** It is important that the music be age and person appropriate. Music genres differ across generations and the purpose is for patients to relate to the music, and not find it stressful, annoying or loud.

Implications for Practice

As an advanced practice nurse or any member of the health care team, it is vital to understand the effects of the use of Risperdal in patients with dementia. Lack of knowledge about the disease process and progression as well as limited knowledge on the use of antipsychotic medications can lead to ineffective treatment. Inadequate information for

caregivers in all settings has also been identified as a compounding problem (De Bellis et al., 2015). A lack of knowledge includes the inability of family members and caregivers to recognize the progression of the disease as opposed to the side effects of the medication or treatment. Many studies suggested that once families were educated on the benefits and side effects of the medication and the behaviors resulting from the disease progression, they were able to report adverse effects of the medication versus challenging behaviors brought on by the disease processes (De Bellis et al., 2015; Douglas et al., 2014; Jackson et al., 2014;)

As a member of the health care team, knowing the positive and negative effects of pharmacological interventions and the benefits of non-pharmacological treatment for dementia with behavioral disturbances is paramount in the treatment for these patients. As suggested by multiple researchers, Risperdal is the most widely used antipsychotic (De Bellis et al., 2015; Shin et al., 2013; Vasilyeva, 2013). Combining pharmacological interventions with non-pharmacological interventions of those with dementia may help to minimize the risk of adverse effects of Risperdal usage. This approach considers each patient as an individual with their own life experiences, triggers, unmet needs, environmental factors, and potential for pain (De Bellis et al., 2015). The practitioner should be able to balance pharmacological and non-pharmacological treatment to provide the best plan of care. In some cases, it may not be beneficial to prescribe only one or the other. The patient's health history and medication history should be considered to inform future research as well as future practice in the context of the research problem. What is the efficacy of utilizing Risperdal alone? What is the efficacy of utilizing non-pharmacological solutions? What is the efficacy of using both? These are questions that may have to be explored in various treatment settings and measuring their effects on agitation and aggression.

The advanced practice nurse has the advantage of promoting communication among all health care providers, creating a partnership with the patient, family, ancillary staff, social workers, and counselors. An effective interdisciplinary team that focuses on person-centered care may lead to improved healthcare outcomes and better quality of life (Douglas et al., 2014). Having a multidisciplinary team could bring further insights into a patient's condition and may also increase patient satisfaction with care. This could lead to further approvals of future research and could also change the way aggression and agitation in patients with dementia are treated.

Implications for Further Research

More research is needed to compare the effects of the interventions on the management of agitation and aggression in patients with dementia. To further compare the effects of Risperdal and non-pharmacological interventions in the patient with dementia, longitudinal studies are needed. Titrating Risperdal to the most effective dose can be difficult, as people go through stages of the disease. No studies discuss at what point Risperdal should be tapered or discontinued. This makes it unclear whether or not Risperdal is a short-term solution or something that can be used long-term to treat agitation and aggression in patients with dementia. Therefore, future research may need to take this scenario into consideration.

Future research could be conducted on medication safety. Elderly patients are often on various medications that may contraindicate with Risperdal. In addition, Risperdal could have side effects that may amplify the symptoms of other comorbidities in patients. Studies could review appropriate dosage titration, discontinuation, and the patient disease progression. In addition, there should be clearly defined behavioral symptoms that correspond to pharmacological and non-pharmacological interventions, as well as adjusting for various care settings (i.e. at-home care, nursing home, long-term care at a hospital, etc.) and other patient

demographics. Involving patients (as far as they are capable of making decisions for their own care), patients' families, and other caregivers in the plan of care could inform future research and see what is most effective for the patient regarding the manifestation of aggression and agitation in the patient's dementia. Utilizing Watson's care theory may be a good starting point, but other patient-centered approaches should be utilized in tandem to ensure reduced aggression and agitation in patients with dementia.

Conclusion

The number of people with dementia will continue to increase as our life spans increase. The best approach for treating patients with dementia exhibiting behavioral symptoms such as agitation and aggression may be debated for years to come. Several perspectives influence current trends in interventions and approaches to behaviors and symptoms of dementia. These perspectives belong to families, caregivers, clinical team members, doctors, and at times to patients themselves. The use of antipsychotic medications, such as Risperdal, to treat patients with dementia has been the mainstay treatment for some time, despite warnings about severe side effects. Several studies have suggested that Risperdal is a better choice and a safer option. That being said, Risperdal has only been suggested to have minimal side effects in low doses and could potentially be as high a risk with increased dosing and frequency.

Non-pharmacological interventions have made great strides in contributing to the treatment of behaviors in patients with dementia. The results of the studies reviewed demonstrate evidence that other treatment interventions can be beneficial and may be considered prior to using Risperdal in patients with dementia. As suggested in the caring theory, it is the caregiver’s ability in the moment to provide person-centered care that will improve a patient’s outcomes. The approach to caring for dementia patients with agitation and aggression has to be person-

centered, focusing on the whole patient. Person-centered care is aimed at treating the triggers that cause the problematic behavior rather than masking the behaviors with medication. The person-centered care approach to treating those with dementia that have agitation and aggression should not pursue a single method but should include what works best for the patient and their families (Douglas et al., 2014). The clinician is entrusted with doing a proper assessment of the patient and treating the patient to the best of their knowledge. Forming interpersonal relationships, building trust, being sensitive to patient needs, and continuing education may contribute to more positive patient outcomes.

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