Implementation of Tai Chi in an Alzheimer's Memory Unit

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Background

Tai Chi has been found to decrease falls in patients with Parkinson's disease and post stroke. It provides aerobic exercise as well balance training. Some believe it to have beneficial cognitive effects in Alzheimer's dementia. Terracina Grand is a large assisted living facility in Naples, Florida. It has a secured 36 bed memory unit that has 39 residents with an average age of 87 years. Residents with and without Tai Chi exercise were compared for falls.

Methods

All residents had baseline characteristics collected which included MMSE, sex, total number of medications, number of antipsychotics and antidepressants. Tai Chi exercise was led by an instructor with 20 years of experience teaching and performing Tai Chi. The classes were tailored to cognitive ability with those needing more individualize instructions receiving it from the CNA's on the floor. Each class lasted 40 minutes and was conducted 2 times a week. Instructions focused around movement, breathing and meditation. Falls were measured for the preceding month prior to implementing Tai Chi and the month during implementation. Residents that had more than 2 standard devastations away from the norm with regard to falls were excluded in both groups. A T-test was used to determine significance.

Results

75% of the residents were female and 25% were male. The baseline MMSE was 8.4 (STD 7.4). The average number of medications per patient was 10.3 with 0.2 medications/patient being antipsychotic and 0.4 medications/patient being antidepressants. The control group had 11 falls in total, 3 with injury and 1 requiring hospitalization. The intervention group had 6 falls (p=.007), 1 with injury (p=.0004) and 1 requiring hospitalization (NS).

Conclusion

Tai Chi resulted in a 45% reduction in falls in Alzheimer's residents and decreased injury during falls by 67%. There was no change in those requiring hospitalization from falls.

Background

Tai Chi

- Tai Chi has been around since 13th century
- Originally started in China as a self defense strategy
- Has been shown to improve strength, balance, and physical function and to prevent falls in older adults
- Tai Chi involves physical movements, mental concentration and relaxed breathing
- It improves balance, strength, flexibility and aerobic endurance.
- Tai Chi is also called meditation in motion
- Been shown to prevent falls in elderly, Parkinson's and post CVA patients

Terracina Grand

- 36 Room secure Assisted Living Facility
- 39 Residents
- Average Age 87
- 75% female, 25% male
- Average MMSE 8.4

Methods

- Fall data is collected and analyzed monthly for quality improvement
- Tai Chi exercise classes were initiated at the beginning of the month
- Fall data was collected for the 30 days prior to initiation and 30 days after
- Tai Chi was led by an instructor with 20 years' experience
- Classes were 40 minutes, twice a week
- They focused on movement, breathing and meditation
- CNA's offered individual attention as needed

Data Collection

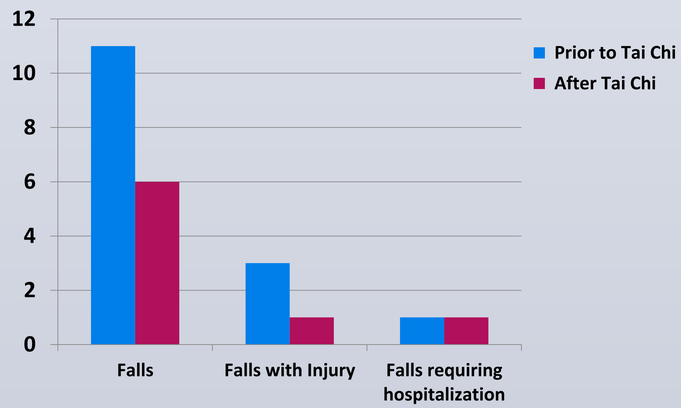
- Fall data was collected daily
- Baseline Characteristics included MMSE, age, number of antipsychotics, antidepressants/antianxiety and mood stabilizers
- Residents with falls that were more than 2 std away from mean were excluded

Results

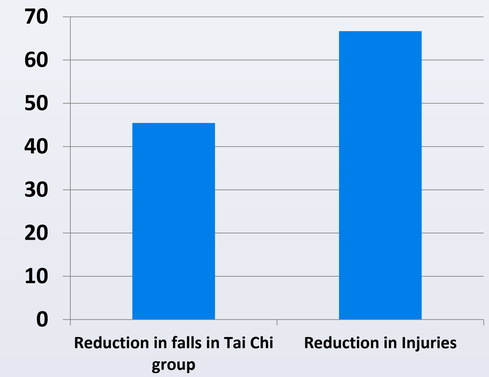
Demographics

Age	**86.9 (69-102)**
Sex	75% Female, 25% Male
MMSE	8.4
Number of Medications	10.3
Number of Antipsychotic	0.2
Number of Antidepressants	0.4

Type of Fall Pre and Post Tai Chi



Percent Reduction in Falls and Injuries



Conclusion

- Tai Chi reduced falls in patients with Alzheimer's disease by 45%
- Tai Chi reduced injuries by 67%

References

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