

Hip Fracture Outcomes in Patients with Dementia



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BACKGROUND

- In patients with a terminal diagnosis such as dementia, hip fractures are associated with a high mortality rate¹.
- While prior studies have suggested that early surgical intervention may result in decreased pain and lower mortality², it is not the only analgesic option for patients with advanced dementia who may not ultimately benefit from a life-prolonging surgery, as these patients are often poor candidates for post-operative rehabilitation and thus experience decreased quality of life⁵. This highlights the importance of considering the overall survival benefit and goals of care of the individual patient when making a decision on whether or not to pursue surgery.
- Our study aims to explore the use of a femoral nerve catheter vs surgical intervention as an alternative to pain control, as similar long-term outcomes may suggest that early involvement of palliative care may be beneficial for these patients and their families to facilitate discussions of goals of care and fully explore all options.

OBJECTIVES

- Do hip fracture patients with dementia who are managed non-operatively with a femoral nerve catheter experience similar mortality rates compared to patients who undergo surgical repair?

METHODS

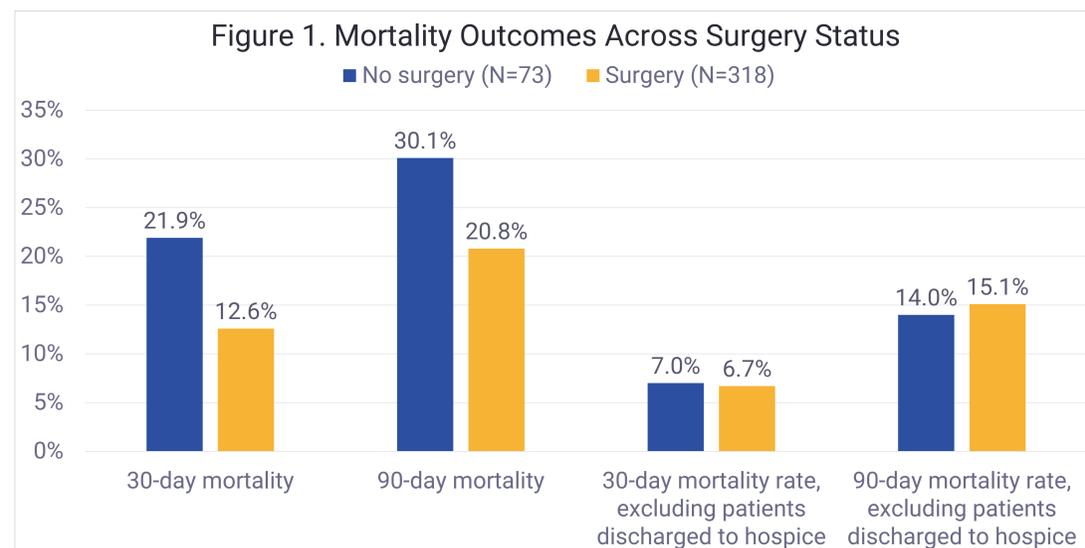
- Data was pulled from Epic looking back as far as March 2013 through October 2019 for patients who had an admitting diagnosis of a hip fracture. If dementia was listed on their hospital diagnosis list or on their personal problem list, the patient was labeled as having dementia. If a hip fracture surgery occurred during the hospital admission for a hip fracture, the patient was labeled as having surgical intervention. Patients who received total hip surgeries were excluded. Patients with more than one eligible admission were reviewed by Dr. Forth to select only 1 admission for inclusion per patient.

RESULTS

- Of the 391 closed hip fracture patients with dementia included in this analysis, 73 (19%) were managed non-operatively while 318 (81%) had surgery during their hospital admission.
- There were no significant differences in sex or age between patients who had vs did not have surgery.
- Those who did not have surgery had significantly shorter LOS (Average LOS = 4.4 vs 6.0). This is consistent whether including or excluding patients who died during the encounter.
- In-hospital mortality rates were low (1.8%) for patients who had surgery, and none of the non-surgical patients died during the hospital encounter.
- 30-day mortality rates were significantly higher in the non-surgery group (p=0.04). When excluding patients discharged to hospice, 30-day mortality rates were identical across surgery status.
- 90-day mortality rates were higher in the non-surgery group when including all patients, but this was not statistically significant (p=0.08). When excluding patients discharged to hospice, 90-day mortality rates were almost identical across surgery status.
- Patients who did not get surgery were significantly more likely to be discharged to hospice (22% vs 10%).
- Patients who got surgery were discharged to SNFs much more frequently than those who did not get surgery (70% vs 49%).

Table 1. Demographics

	All Patients with Dementia (N=391)	No Surgery (N=73)	Had Surgery (N=318)	P-value
Sex				
Male	30% (116)	29% (21)	30% (95)	0.96
Female	70% (275)	71% (52)	70% (223)	
Age				
18-64	2% (8)	1% (1)	2% (7)	0.50
65-74	6% (23)	7% (5)	6% (18)	
75-84	28% (110)	34% (25)	27% (85)	
85-94	53% (206)	44% (32)	55% (174)	
95+	11% (4)	14% (10)	11% (34)	



CONCLUSIONS

- Our study suggests that patients with dementia who suffer a hip fracture may experience lower 30 and 90-day mortality rates when they undergo surgical repair.
- However, when excluding patients discharged to hospice the mortality rates between groups were almost identical. This is notable, considering that nearly 80% of the non-operative patients were not discharged to hospice.
- It is also unknown if other factors may have contributed to the higher mortality rates in the non-surgical patients discharged to hospice, as this disposition typically involves more medically and psychosocially-complex patients and decision-making. For example, some of the non-surgical patients in our study may have already qualified for hospice prior to their hip fracture, or their families may have already been considering this option for various reasons.

FUTURE IMPLICATIONS

- Managing patients with dementia can be challenging in itself, and families may feel overwhelmed if faced with additional hurdles if their loved one suffers a hip fracture. We hope this study prompts discussion between patients, their families, and providers when faced with these issues, as they may not be aware that there are alternatives to invasive surgical procedures, or that these procedures may not result in improvement in long-term mortality outcomes. Additional studies with a larger number of patients would be helpful to further explore these outcomes. Regardless, involving a palliative care group in these discussions will facilitate a better understanding of a patient's goals of care and whether surgery aligns with those goals.

REFERENCES

Literature review

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