Short Communication

Management of Delirium in Hospitalized Patients at the End-of-Life

Deborah Morris[1]*, Daniel Ha[2], and Marissa Galicia-Castillo[2]

[1]Department of Internal Medicine, Eastern Virginia Medical School, USA
[2]Palliative Medicine, Eastern Virginia Medical School, USA

Abstract

Background: While many patients hope to die at home, many die in hospitals. Patients die with unrecognized and untreated delirium.

Objective: This study examines the prevalence and treatment of delirium in hospitalized patients at the end-of-life. Examining these practices will inform quality improvement strategies to enable us to meet the needs of patients dying in the hospital.

Methods: Retrospective chart review of deaths at tertiary care hospital over a 6 month period evaluated presence of delirium, treatment orders, as well as presence of palliative care consultation.

INTRODUCTION

Delirium is a common disorder in seriously ill patients. The prevalence of this disorder is between 13% and 18% in hospitalized medically ill patients, but is seen with increased frequency at end of life as terminal delirium [1,2]. Previous research demonstrates delirium is often under-recognized and misdiagnosed in the hospital setting [1,3]. This condition is an unfortunate and frightening problem that contributes to both the suffering of the patient, families, and caregivers [1,4]. Delirium has also been shown to be associated with poorer short- and long-term outcomes for patients and families including risk for institutionalization [3,5].

Although there are published guidelines for the treatment of delirium, little is documented about its management in hospitalized patients at the end-of-life. Experts recommend antipsychotics as the cornerstone for effective treatment of delirium in the palliative care population; however it is unclear if this is routine practice in end-of-life care for hospitalized patients [1]. In practice, benzodiazepines have been utilized in the treatment of delirium even though evidence does not support this practice, and in fact, may worsen the delirium by causing a paradoxical agitation. [1,6]. This study examines the prevalence and treatment of delirium in hospitalized patients at the end-of-life. Examining these practices will inform quality improvement strategies to enable us to meet the needs of patients dying in the hospital.

METHODS

Study design, patient population, and procedures

A retrospective chart review of all deaths at a tertiary care hospital was conducted to assess for the prevalence of delirium in hospitalized patients at the end-of-life, as well as to examine treatment regimens for these patients with and without palliative care consultation. A list of decedents was obtained for a 6 month period (May 1, 2013 to October 31, 2013) from electronic medical records (EMR). Clinical diagnoses of delirium were abstracted from physician or physician extenders documentation in the EMR. Delirium was defined as documented "delirium", "Altered mental status (AMS) or "confusion" in provider notes or the problem list in the last 24 hours of life. Age, ethnicity, ward, code status, primary diagnosis, presence of palliative care consultation, as well as orders for first line treatment (antipsychotics) prescribed, or alternative medications were used (benzodiazepines) were also abstracted in the patient's last 24 hours of life.

Descriptive statistical analysis performed calculated the percentage of patients experiencing delirium in the last 24 hours of life for all decedents. For patients with documented delirium, treatment in the last 24 hours was assessed by the presence of antipsychotic and benzodiazepine orders. Statistical analysis using analysis of maximum likelihood estimates performed with Wald Chi-square test examined the association of palliative care consultation and treatment of delirium. Odds ratios were used to examine the association between palliative care consultation and pharmacological intervention for their delirium, adjusting variables of length of stay (LOS) and ethnicity.

RESULTS

251 patients died in the study period. 39% (N=98) of all decedents met our criteria for delirium having documentation of delirium, confusion and/or altered mental status. Of the 251

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deaths, 4% (N=11) patients were documented as "delirium," 6% (N=16) patients as "confusion," and 37% (N=92) patients as "altered mental status". Some of these patients were documented with one, two, or all three descriptions: delirium, confusion, and altered mental status.

64% of decedents with delirium (N=63/98) were prescribed antipsychotics. 80% of decedents with delirium (79/98) were prescribed benzodiazepines. Decedents with palliative care consultation were more likely to receive pharmacologic treatments for their delirium, P<.0022 and P<.003 respectively for antipsychotics and benzodiazepines. Furthermore, patients with a palliative care consult were 3.65 times more likely to be prescribed medication for their terminal delirium (95% confidence interval, 1.47 to 9.09).

DISCUSSION

Terminal delirium is a common symptom at end-of-life. For the medical team caring for hospitalized patients at the end-of-life recognition and diagnosis early on is important to provide proper treatment accordingly.

As prior studies indicate delirium prevalence rates as high as 88% [7], our study suggests that delirium may be poorly recognized and documented in the hospitalized patient at the end-of-life. Our finding delirium in 39% of our population is likely an underestimation as this study is retrospective relying on specific diagnosis codes in medical documentation. Our findings indicate variability in pharmacologic management of terminal delirium with more patients receiving treatment that is not recommended with benzodiazepines than first line treatment of antipsychotics.

The presence of palliative care significantly impacts the care received for patients hospitalized at the end of life. Our studies demonstrate variability in current practice even with the support of palliative care consultation. Standardized protocols are needed to guide best practice of delirium in hospitalized patients at the end of life.

Our study is a small, retrospective review of practice at a single hospital. We were further limited in our review of practice by what was easily reviewable in the electronic medical record. We did not examine co morbidities that may have contributed

to prescribing patterns including anxiety disorders, nausea or alcohol dependence warranting benzodiazepine usage. Future quality improvement projects will include these factors.

Despite these limitations, we hope to use these findings to develop education initiatives and protocols for treatment of terminal delirium. The recognition and proper management of terminal delirium begins with assessment, diagnosis, and treatment. Palliative care teams can help hospitals assess their care of patient's at the end of life by performing quality improvement projects like this one.

CONCLUSION

Health care providers are not optimally treating delirium at the end of life in the hospital. It is important to recognize and diagnose delirium and to provide proper treatment to improve quality end-of-life care. Collaboration with palliative medicine providers may improve assessments, education, and treatment of this distressing symptom.

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