AUDIT

Prevention of falls in hospital: Audit report from a Tertiary care hospital of Pakistan

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Abstract

Objective: The study aims to assess the fall incidents in past 5 years and fall assessment practices at the Aga Khan University Hospital, Karachi.

Methods: We performed a single-center retrospective audit at Aga Khan University Hospital from October 2019 to December 2019. A list of all patients admitted to Aga Khan University Hospital under the Musculoskeletal and Sports Medicine Service Line was obtained using the Hospital Information Management System (HIMS) from Jan 2017 to June 2018. Data including fall assessment scores was collected retrospectively from medical record files.

Results: A total of 1499 patients were admitted during this time period, of whom 5 patients had a fall incident during their hospital stay. The mean Morse Scale scores of patients who had a fall was 50 ±16 whereas, patients with no fall incidence had mean score of 31±22. Fall assessment was documented in nursing notes for 100% of the patients.

Conclusion: Our findings show that fall policy is implemented strictly within our hospital. In order to reduce the risk of a fall further, more in-depth assessment of high risk patients with involvement of physicians and physiotherapists earlier on in the process for high risk patients may be beneficial.

Keywords: Fall assessment, Fractures, Elderly population. (JPMA 71: S-79 [Suppl. 5]; 2021)

Introduction

Falls in elderly population are of major public health significance. One in three older people experience one or more falls each year.[1] Falls during stay in healthcare setups are very common and constitute 20-30% of all incidents reported in hospitals.[2] In the United States, more than 700,000 patients experience a fall during their hospital stay each year.[3] Despite unceasing advancement in medical care, incidence of in hospital falls continue to rise with 8.9 falls per 1,000 bed-days.[4]

Falls can result in a number of detrimental effects for the patients such as physical injuries and fractures, inadvertent drain removal, psychological trauma and exacerbation of future fear of falling, worsening of clinical parameters, increased hospital stays, morbidity and mortality.[5] Literature reports that overall 24% of patients with a hip fracture after the index fall, who are fifty years or older, die within one year following the fracture.[6] In addition to the direct effect on the patient, the economic costs of falls are substantial. In Pakistan, 85% of patients are out of pocket payers both for their treatment and rehabilitation.[7] In such circumstances, falls can pose considerable economic burden for both patients and the healthcare system. Psychological trauma is also one of the significant consequence following a fall. Patients might be traumatized or may develop fear of physical activity even if they do not sustain substantial physical injuries, thus limiting their overall mobility.[8]

Fall prevention programmes in hospitals are an innovative methodology to minimize fall experiences during hospital admissions.[9] These programmes involve coordinated interdisciplinary approaches. Some aspects of fall prevention programmes are part of routine care and standardised for all patients while other aspects need to be tweaked based on individual needs.[10] No physicians working alone, can eliminate falls completely. Instead, fall prevention is always an approach which is achieved with team work and coordination. It also requires an adaptable organizational culture, operational policies, and focused practices such as communication and reporting in addition to individual expertise.[4]

Aga Khan University Hospital follows a fall assessment policy approved by Joint Commission International Accreditation (JCIA). Fall prevention is the 6th JCIA international safety goals.[11] As per policy, all patients admitted at AKUH are assessed for the risk of fall at the time of admission and are reassessed during their hospital stay. Appropriate actions such as fall teaching, environment safety, and documentation is implemented to prevent falls in hospital. Besides, hospitals also examine any incident of fall event during hospitalisation and

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causes of fall. This study aims to perform a clinical audit for patients admitted under musculoskeletal service line to assess fall prevention policy and its impact on fall incidences at AKUH.

Methods

A single center retrospective audit was performed to evaluate fall prevention practices at Aga Khan University Hospital (AKUH) in Karachi, Pakistan. We utilized an inpatient database of all adult admissions under orthopaedic specialty from Jan 2017 to June 2018 which is maintained by hospital information management system (HIMS) at AKUH. The data was collected from October 2019 to December 2019.

The institutional review board (ethical review committee) exemption was obtained. Participants were all adult patients (aged 18 years and above) admitted under musculoskeletal service line. The exclusion criteria for study participants was unavailability of data records in data base. A total of 1499 patients were admitted under orthopaedic specialty at Aga Khan University Hospital during this period. We performed simple random sampling using patient medical record numbers to include 28 subjects in the fall prevention practices evaluation at AKUH who did not fall, whereas 5 patients who did fall were included as cases in the analysis.

Data were collected retrospectively from medical record files of randomly selected control patients and cases. A pre-structured questionnaire was used to collect information from medical record files. We divided our audit in to three basic indicators including incidence of fall during January 2017 to June 2018, implementation of fall risk assessment policy, and fall teaching by nurses. The data collection was completed in 6 months after ERC approval.

Fall is a quality indicator of AKUH and its data is maintained for each inpatient ward and outpatient clinics by quality control department. We have an incident report form to be filled by healthcare providers including nurses and doctors at the time of each fall incident. Later, a root-cause analysis is performed by quality control department for each fall incident. A total of 5 patients had fall during 2017 to 2018. We requested medical record number of these 5 patients from department of quality control at AKUH.

Fall risk assessment is performed for all patients presenting to Aga Khan University Hospital using Morse Fall Scale (MFS).[12] It is a simple and validated tool used for assessing a patient's likelihood of falling. Nurses administer this tool within 30 minutes of admission and initiate fall risk care plan. The MFS scores on six variables which consist of history of fall (within three months), secondary diagnosis, ambulatory aids, intravenous therapy, gait and mental status. Scores of 0 to 24 indicates "No Risk" and requires basic good nursing care while scores $\geq$ 51 indicates "High Risk" with implementation of fall prevention intervention. Fall teaching is a critical part of nursing care. We used nursing care notes to assess teaching given to patients on fall risk and precautions to be taken.

We used STATA version 12.0 to perform all the analyses.[13] Descriptive statistics was used to evaluate fall prevention practices at AKUH. We calculated number of falls during the study period and number of times a fall was documented in nursing notes. Mean and standard deviations were computed to analyze Morse Fall Scale scores for patients who fell and those who did not fall.

Results

A total of 1499 patients were admitted under musculoskeletal and sports medicine service line at Aga Khan University Hospital during Jan 2017 to June 2019. Five of 1499 patients had a fall incident during hospital stay (Figure-1). We performed simple random sampling

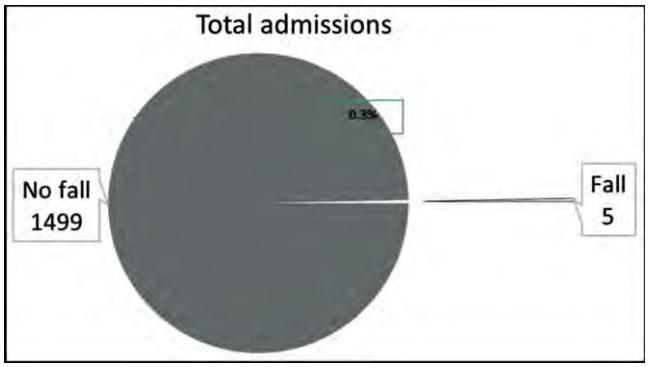

Figure-1: Incidence of fall among Orthopaedic patients (1499).

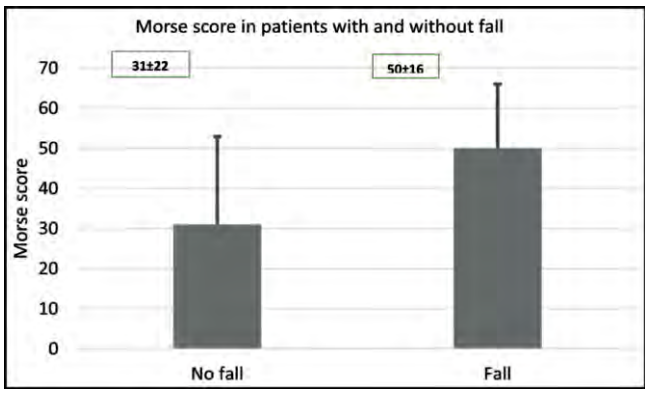

Figure-2: Comparison of Morse fall scores between fall cases and controls.

using patient medical record numbers to include 28 subjects in the fall prevention practices evaluation at AKUH who did not fall, 8 (28.6%) were admitted with the history of fall. Comparison of Morse Fall Scale scores showed that patients who had fall incident during hospital stay had mean scores of 50±16 whereas, patients with no fall incidence had mean score of 31±22 (Figure-2).

Fall assessment was documented in nursing notes for 100% of the patients which specifically included teaching on fall risk and fall precautions.

Discussion

The purpose of the present study was to audit fall assessment practices and policy implementation at Aga Khan University Hospital. We found that fall documentation was completed in nursing notes for all the patients recruited in the study along with fall assessment at the time of admission. The study also indicates that fall assessment performed by healthcare providers at the hospital can identify high risk patients to a great extent.

Falls are serious health concerns for older adults. Its occurrence increases with aging.[14] Falls during hospital stay are common sentinel events, often resulting in severe physical injury and even death.[15] Although falls are common in older adults and fragile individuals, any person with altered mental status related to medication, procedure, and surgery can be at risk of falling.[16] In contrast, physical environment should also be considered as a potential risk factor for falls. Despite of these potential risk factors, falls are preventable especially in hospital settings.[17] One of the most significant component in preventing hospital falls is implementation of appropriate fall prevention programmes.

In our hospital, we have implemented fall prevention policy adopted from Joint commission international accreditation (JCIA).[11] JCIA addresses in-hospital fall prevention strategy as 6th IPSG goal and aims fall prevention through timely fall risk assessment, identification and analysis of fall cases, and training and education for healthcare providers. Thus, this study aims to assess the effect of JCIA fall prevention policy on incidence of falls and assessment of fall risk.

Our findings showed that only 5 patients had a fall from 2017 to 2018 and fall policy is implemented strictly within our hospital. Also, fall assessment which is done via Morse fall scale can identify high risk patients to a great extent. Fall prevention is the responsibility of all health care providers. However, role of nurses is inevitable in implementing fall prevention policy. Nurses play a pivotal role in identification and assessment of risk factors for a fall, facilitate in clinical decision and reasoning and initiate fall care plan. Our study showed that fall assessment was documented in nursing notes for 100% of the patients which specifically included initiation of fall care plan, teaching on fall risk, and fall precautions.

Conclusion

In-patient hospital fall and its immediate and late outcome is concerning for patients.

The results of the study indicates that AKUH has implemented fall prevention policy very stringently, ensuring timely assessment and accurate documentation. However, periodic in-depth assessment of this policy specifically involving other multidisciplinary departments and their role in fall prevention such as physicians and physiotherapists will give us an insight of internal liabilities and how we can solve the problems.

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Conflicts of Interest: None.

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