

Factors associated with patient who underwent leave against medical advice in the semi-closed intensive care unit

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ABSTRACT

Background: Leave against medical advice is a more prevalent challenge in Intensive Care units of developing countries compared to developed ones.

Methods: This prospective observational study was done included 466 patients aged ≥ 18 years who underwent leave against medical advice in a level three intensive care unit of a medical college. The patient admitted to the intensive care unit who chose to leave against the clinicians' advice was referred to as leaving against medical advice. All data were first entered into an Excel sheet and then transferred to a statistical package for the social sciences-16 for analysis. The descriptive data are presented as the number and percentage for categorical data and mean \pm standard deviation for continuous data according to their distribution.

Results: A total of 466 patients were included in the study, and among them, 273 (58.58%) were male and 193 (41.41%) were female. Middle-aged patients account for 234 (50.21%) cases. Most patients, 460 (98.71%) were admitted from the emergency department. LAMA occurred most frequently during morning shift, 258 (55.56%) and in the month of Chaitra 19.4%. The mean ICU stay was 2.53 ± 1.92 days. Internal Medicine accounted for 221 (47.2%) who underwent leave against medical advice. 59 (12.6%) were mechanically ventilated. Poor prognosis was the primary reason in 278 (59.64%) patients who underwent leave against medical advice.

Conclusions: Poor prognosis and financial problems were the most common reasons for patients to leave against medical advice. Therefore, government and other institutions should address this as a critical issue in patient management.

Keywords: Developing country; Intensive Care Units; Morbidity

INTRODUCTION

Leave against medical advice (LAMA) refers to the behaviour of patients or their families to terminate their treatments and leave the hospital ignoring their doctors' permission.¹ There may be regional and other differences in the magnitude and factors leading to LAMA rate which includes social beliefs, social support, belief in alternative therapy and medical facility, demographic and economic constraints.

There is considerable variation in the prevalence rate of LAMA, ranging from 0.002% to more than 45% in the world.²⁻³ In Nepal, studies have shown the prevalence of

LAMA is 5.68-30.86% in different units and settings of hospitals.^{1,2,4,5}

There is a single retrospective study in the intensive care unit (ICU) by Adhikari K et al from Nepal that has shown the prevalence of LAMA in ICU was 30.86%.⁴ Therefore, this prospective study was conducted to determine the prevalence and factors associated with the LAMA in the ICU of southern Nepal.

METHODS

This was a prospective observational study conducted in a level three intensive care unit of the National Medical

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College between 1stBaisakh 2081 to 31stChaitra 2081. The ethical approval was obtained from the Institutional Review Committee before enrolment in this study. The ethical approval number was F-NMC/655/079-080. Written informed consent was obtained from the patients or surrogate decision-makers.

Consent was obtained in the patient's or surrogate's preferred language using a standardized consent form with different tools, including diseases, prognosis, and outcome. For patients who were unconscious or unable to provide consent, the legally authorized representative or next of kin was approached. Only those who provided written informed consent were included in the study, and consent was taken by the Critical Care team and the primary consultant.

All patients 18 years or older admitted to the mixed intensive care unit of a medical college who underwent leave against medical advice were included in this study. The patient admitted to the intensive care unit who wished to leave against the clinicians' advice was referred to as leave against medical advice (LAMA).

Patients who were younger than 18 years, surrogate decision-makers, or those who did not give written informed consent were excluded from this study.

Data was collected regarding their demographic characteristics, clinical characteristics, and LAMA-related characteristics using a structured questionnaire. Sample size is 466.

Where, n= minimum required sample size, Z= 1.96 at 95% Confidence interval (CI), p= prevalence from a previous study, q= 1-p, e= margin of error, 5%. Bias was reduced by collecting data from all groups of patients.

Data collection was performed using a preformed sheet. The preformed sheet included all physiologic variables and demographic variables. All collected data were entered into the Excel sheet and analyzed using SPSS version 16. The descriptive data are presented as the number and percentage for categorical data and mean ± standard deviation for continuous data according to their distribution.

RESULTS

A total of 2,928 patients were admitted to the ICU during study period. Among them, 466 (15.91%) patients underwent LAMA.

Table 1. Demographic characteristics of study population.

Parameters	n(%)
Age (Years)	
18-35	118(25.32)
36-60	234(50.21)
>60	109(23.4)
Sex	
Male	273(58.58)
Female	193(41.41)

Table 1 shows the demographic characteristics of the study population. LAMA was most common among middle-aged patients (36-60 years) rather than younger and older age patients. There were 273(58.58%) males and 193(41.41%) were females who left against medical advice.

The minimum and maximum ages of the patients who underwent LAMA were 18 and 105 years, respectively. The mean age was 52.14±18.82 years.

Table 2. Clinical characteristics of study population.

Parameters	n(%)
Source of patient admission in ICU	
Emergency	460(98.71)
Ward	5(1.07)
Operation theatre	1(0.21)
Duty hours during which patient went LAMA	
Morning	258(55.36)
Evening	170(36.48)
Night	38(8.15)
Length of stay in the ICU (Days)	
≥2	296(63.51)
<2	170(36.48)

ICU: Intensive Care unit, LAMA: Leave against medical advice

Table 2 shows the clinical characteristics of the study population. This study showed that the majority 98.7% of patients, were admitted from the emergency department. Most LAMA cases occurred during the morning shift. A total of 170 patients (36.48%) have an ICU stay of less than 2 days.

The minimum and maximum length of stay in the ICU

were 1 and 19 days, respectively. The mean length of stay in ICU was 2.53 ± 1.92 days.

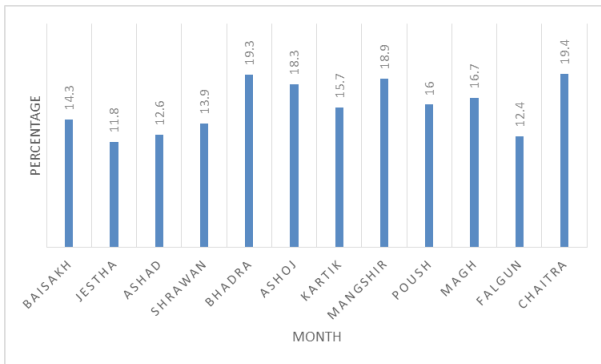


Figure 1. Distribution of hospital place patients when they had leave against medical advice.

Figure 1 shows the distribution of hospital patients who left against medical advice. It showed that patients went LAMA mostly in the month of Chaitra.

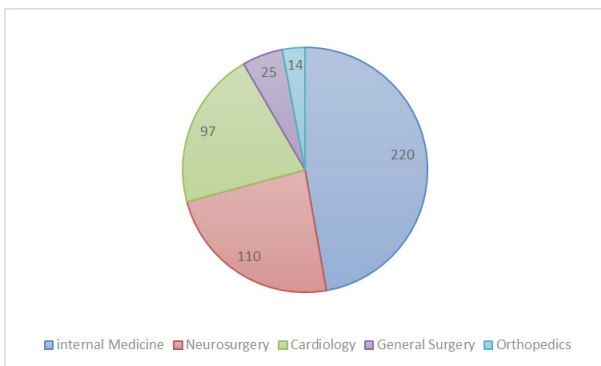


Figure 2. Distribution of patient according to specialty when they had leave against medical advice.

Figure 2 shows the distribution of patients who underwent LAMA according to specialty. The highest number of patients 221 (47.2%), who underwent LAMA, were admitted under Internal Medicine, followed by Neurosurgery 110(23.6 %), Cardiology 97(20.8 %), General Surgery 25(5.3 %) and Orthopedics 14(3%).

Out of 2,928 total ICU admissions in the study period, 293(10%) patients were mechanically ventilated, among them 466 patients who underwent LAMA, 59(12.6%) were on mechanical ventilation.

Table 3. Primary cause for leave against medical advice.

Parameter	n(%)
Poor prognosis	278(59.64)
Financial problems	80(17.16)
Other hospital	59(12.66)
Feeling better	27(5.79)
Not known	11(2.36)
Refused surgery	8(1.71)
Personal problem	3(0.64)

Table 3 shows the primary cause for leave against medical advice. Poor prognosis was the most common reason for LAMA.

DISCUSSION

This study found that 15.91% of ICU patients underwent leave against medical advice, which is similar to findings from other studies.^{4,6}

Middle-aged patients were common in our study, which is a similar finding from the study done by Adhikari K et al.⁴ On the other hand, a study by Gunchan P et al⁶ showed that older age patients underwent LAMA. This difference could be due to differences in the study population, as patient relatives do not want to spend more money on the older population.

This study has shown that 58.58% of patients who underwent LAMA were male, which is similar to other studies.^{1,2,4,7-8} while a study by Gunchan P et al⁶ showed that females were more common. This difference might be due to social stigma in treating females in developing countries and male-dominated societies.

In our study, the majority, 98.71% of patients who underwent LAMA were admitted through the emergency department, which is similar to a study by Oyemolade TA et al.⁹

Our study showed that 55.36% underwent LAMA during the morning shift. This is because the primary consultant, intensivist, and other doctors are together in the morning hours, which helps the patient's party or guardian to understand the prognosis and decide about the goal of patient care.¹⁰

This study showed that 63.51% of patients who underwent LAMA had a length of stay in the ICU of more than 2 days, which is similar to a study by Sapkota S et

al.¹

Our study showed that 47.2% patients of internal medicine underwent LAMA, which is similar to other studies.^{2,4,11-13}

This study showed that 12.6% of mechanically ventilated patients underwent LAMA, which is similar to a study by Sapkota S et al¹ while a study by Adhikari K et al⁴ and Bhoomadevi A et al¹² showed 30.86% and 60% respectively. This difference may be due to the presence of full-time intensivist in our ICU and the delay in referral to an intensivist by the primary physician.

This study showed poor prognosis was the primary reason for LAMA in 59.64% of patients, which is similar to a study by Gunchan P and Bhoomadevi A et al^{6,12} while other studies^{1,4,9,13} have shown that financial problem is a common cause of LAMA. These differences may be due to differences in the study population,^{14,15}

Our study has certain limitations, such as it was a single-center, small sample size study. Additionally, the study did not evaluate the final outcome of patients who left against medical advice.

CONCLUSIONS

Leave against medical advice remains a significant challenge that affects patient management in the intensive care unit. The most common reasons for LAMA were poor prognosis and financial problems. These findings highlight the need for government panels and healthcare institutions to recognize LAMA as a serious issue and implement targeted strategies to address its underlying causes and minimize its impact on patient care.

CONFLICT OF INTEREST

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