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ASSESSMENT OF STAYS IN INTENSİVE CARE UNIT WITHOUT INDICATIONS AS PER DISCHARGE DAYS

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ABSTRACT

Purpose: To investigate the discharge days of patients in Intensive Care Units and to evaluate whether these outcomes reflect discharge decisions at the right time or not. Method: Discharge days, sickness diagnosis, ages and gender types of 1550 patients which we monitored in Intensive Care Units between years of 2013-2017 have been retrospectively recorded in electronic registry system. Findings: While there was no difference with respect the the period of staying at the hospital as per gender types, the period of staying at the hospital was longer for the group with ages above 65 ($p<0,001$). Primary diagnosis for staying as general internal medicine, respiratory and neurological groups was composing %75,7 of all patients. Discharge days was highest on mondays (%26,3). Conclusion: Having determined that discharges are higher on Mondays makes one think that there are unnecessary stays being extended without indications especially on weekends at the Intense Care Units. Our study bears importance as discharge days will be evaluated and extended stays without indicators could be seen.

KEYWORDS: Usage of Intensive Care Units without indicaitons.

INTUDUCTİON

Intensive Care (IC) is defined as the total of methods being implemented for supporting patients until negative effects of partially or completely lost organs or system functions are eliminated, for treating the causes making up the disease and for enabling the patient to survive.[1]

Acceptance of patients to Intensive Care Unit (ICU) can be realized in 2 different ways as being composed of patients within hospital and in other hospitals as their need for ICU is considered. Decision for the patient to stay at ICU is taken as per the diagnosis and severity of his disease. This decision should be taken correctly to keep the quality of care services high and to keep relevant costs low as bed capacity is limited ICU. Patients who are in critical condition, who are not stable, who don't have any change to be treated outside ICU and who have a change to be healed by being treated in this unit should be taken in the ICU.[2,3] While acceptance of patients to ICU should be made as per certain criteria, regarding the stay of patients in ICU in the world and in Turkey, ratio of compliance with this criteria is low. In the study being conducted by Clark and Normile[4], although acceptance and discharge criteria are written in %97.2 of ICU, they have stated that non-conforming stays were realized. This particular shows us that even in the developed countries this subject has not been completely resolved.

The purpose of this study is to evaluate the discharge days of patients being discharged from ICU, as they were in these units and to assess whether these results reflect patient stays in these units without indications or not and to emphasize relevant reasons in case they are reflecting these.

STATISTICAL METHODS

In this study, regarding 1550 patients who were discharged from ICU Internal Diseases Division between years of 2013-2017, statistical comparison has been retrospectively made as per their acceptances in ICU, discharge days, as well as their ages, gender types and sickness diagnosis groups. Patient ages are divided into two groups as being those of age 65 and above and those below the age of 65. Those who periods of stay were shorter than 48 hours and those whose ages were smaller than 16 were left outside the scope of study.

Statistical analysis are made by using 21th version of SPSS. Conformity of variables with normal distribution is investigated by using visual (histogram and probability graphics) and analitical methods (Kolmogorov-Smirnov test). In the descriptive analysis, variables are defined by using average and standard deviations and categorical data are defined in terms of n (number) and percentages (%). In the comparisons, Pearson Chi-Square test and Man Witney U tests have been used. Data have been

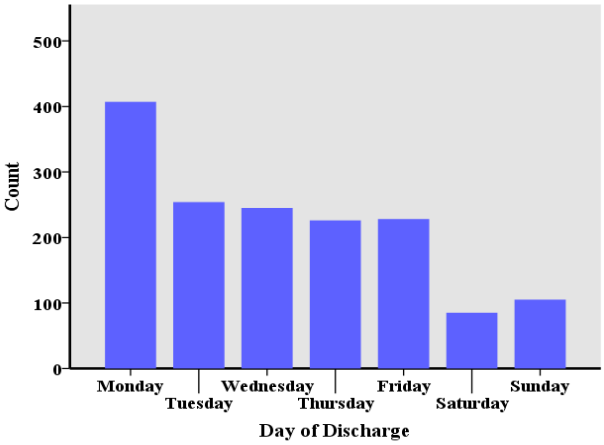
analyzed with confidence level of %95 and p value that is below 0.05 has been considered to be meaningful.

RESULTS

1550 patients have been included in our study in total whereas 772 (%49.8) are males and 778(%50,2) are females. Age average of patients is calculated as 62,40 ± 21,26 years. 667 (%43) of patients were at or above the age of 65 and 883 (%57) of them were below the age of 65. It is observed that internal diseases, general, respiratory, nephrology diseases constituted majority of primary staying diagnosis groups (%75,7). (Figure 1.)

Comparison of discharge days of patients from ICU is given in Graphic 1. Accordingly while Monday is the day on which patient discharges were at maximum with 407 (%26,3) patients, Saturday was the day on which discharge of patients was at minimum 85(%5,5) number of discharges (Graphic 1). In the grouping made as per age of 65, discharge days of both groups were similar and there was no difference between discharge days as per the age groups (Table 1). Periods of stays was similar as per gender types of patients. Periods of stays as per age groups were statistically different and this difference originated from the fact that periods of stay of patients above the age of 65 were long (Table 2).

Table, Figure and Graphic



Graphic. 1: Distributions of cases as per discharge days.

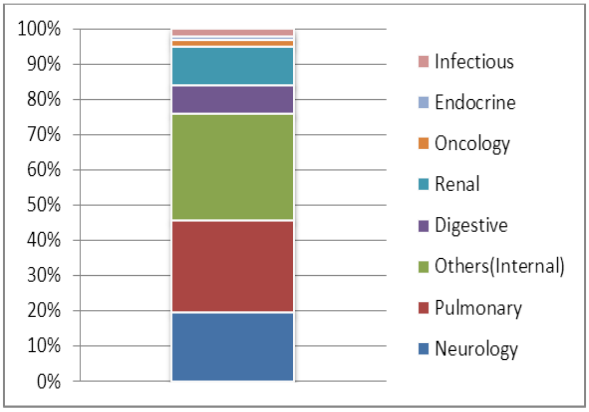


Figure. 1: Distribution percentages of cases as per diagnosis relating with stays.

Table. 1: Discharges of day care patients according to age.

	Aged under 65 years		Aged 65 years and older		Total		p
	n	%	n	%	n	%	
Days of discharge							0,251
Monday	178	11,5	229	14,8	407	26,3	
Tuesday	97	6,3	157	10,1	254	16,4	
Wednesday	104	6,7	141	9,1	245	15,8	
Thursday	103	6,6	123	7,9	226	14,6	
Friday	90	5,8	138	8,9	228	14,7	
Saturday	45	2,9	40	2,6	85	5,5	
Sunday	50	3,2	55	3,5	105	6,8	

n: number of patients %:percentages of patients

Table. 2: The length of stay of patients according to gender and age.

	Length of stay (day) (min.-max)	P value
Sex		0,589
Male	4(2-62)	
Female	4(2-106)	
Age (years)		P<0,001
Aged 65 years and older	78(65-112)	
Aged under 65 years	45(16-64)	

DİSCUSSİON

Realizing patient stays with correct indications at ICU and discharging patients who will not need ICU hardware are important and difficult decisions. At certain centers, age, disease diagnosis and severity are being considered in patient stays. Garrouste-Orgeas et al[5] have stated that in France patients were examined by physicians and that as they considered their ages, dependency situations, and underlying diseases, %43.4 of them were not accepted in the Intense Care Units.[6] In our study as it is determined that number of patients are or above the age of 65 were lower than number of patients with age below 65, the opinion that age factor is considered during patient admissions in our country has been supported.

In the study they conducted, Azoulay et al[7] have determined while doctors accepted patients with acute respiratory failure, shock, and coma, they had the tendency to reject patients above the age of 65, as having chronic respiratory or heart failure or malignity.[8] In our study, as per disease diagnosis no statistical differences were found between patients above the age of 65 and those below the age of 65. These findings reveal to us that chronic patients in terminal period were not rejected during patient admissions to ICU.

Discharge requirement of patients being admitted to ICU is a complex and dynamic process.[7,9] General status of patient, invasive process, fear, medical treatments, changes in consciousness level of patient and similar probable variables are the important variables to be considered while discharging patients from ICU.[7] Status of patients being admitted to ICU should be continuously controlled to determine those patients not needing longer period of intense care.[10,11] By providing discharge of patients whose general status has improved and who could obtain case in the relevant services in an early period, it should be avoided for the beds to be occupied in an unnecessary way.[12]

Various studies have been made relating with assessment of patient stays with indications in 3rd stage Intensive Care Units. In these studies patient admission and rejection criteria, mortality and morbidity, APACHE values and diagnosis have been frequently compared. In our study, assessment of discharge days of these patients as based on patient group being admitted to ICU and being discharged from there, reveals difference with respect to all the previously conducted studies. According to our study, while it is required for the ratios to be at similar level on the average for each day as per probability calculation regarding the comparison of patient discharge days in private divisions such as ICU, as discharge ratios are at maximum on mondays in our study, it is considered by us that patient discharge ratios are not a coincidental outcome but rather the result of prolonged stays of patients without indications. In the conditions of our country, it is considered that discharge rates are higher on mondays as specialized doctors are not present in services especially on saturdays and sundays and though patients come to the level of discharge from ICU, as patient monitoring safety is considered, discharges are delayed to mondays. While patients can be confronted with complications such as delirium, post-traumatic stress disorder, and depression due to their staying at ICU for long and unnecessary periods regardless of their reasons[13], when it is considered that almost all of the patients are confronted with a medical mistake that has the potential to thread their lives in any period during when they stay in intense care unit[14,15] we should not forget how important it is to avoid from unnecessary and prolonged stays in ICU.

In our study having determined that discharges are higher on mondays bears importance with respect to the opinion that it can show to be attained by conducting statistical works for evaluation of continuity of patients stay with indications at ICU and discharges as per the days. As the study is limited, we think that with a study to be conducted as having multi- centers and in variety of numbers more accurate results could be obtained .

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