

PREVALENCE OF THE ADMISSION CAUSE IN THE INTENSIVE CARE UNIT (ICU)

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ABSTRACT

Background: Intensive care is an important unit for the care of patients suffering from serious diseases such as heart failure, car accidents, sudden high blood pressure, acute asthma, heart attack, acute hyperglycaemia, severe haemorrhagic, Severe Pneumonia, complications of surgery, multiple and multiple fractures, cerebral thrombosis, burns, and falling from high places. **Aims:** To identify the cause of admission to ICU among patients in Baghdad. **Methods:** A cross-sectional study conducted in the intensive care unit in neurosurgery teaching hospital in Baghdad. All the cases admitted from January 2018 to the end of June 2018 was enrolled in this study. Semi-structured questionnaire was used to collect the information from

the records. The sample size was 250 cases. Data was described by using descriptive statistics such as frequency, percentage, Fisher chi-square, and p. value. STATA version 14 statistical package was used to analyse the data. **Results:** Two hundred and fifty participants, the highest frequency of cases 134/250 (53.6%) still in the age greater than 40 years and 151/250 (60.4%) are males, also the majority 170/250 (68%) were unemployed. The highest frequency of admission causes 78/250 (31.2%) was a road traffic accident, followed by hypertension, diabetes, complication after surgery and gunshot. (17.2%), (16.8%), (15.6%) and (8.8%), respectively. **Conclusions:** There are a significant relation between age, occupation, gender, outcomes and the causes of admission at p. values less than 0.05.

Recommendation: We need further research on this field to decrease the mortality and morbidity among people.

KEYWORD: Intensive, cause, unit, care, complication, RTA.

INTRODUCTION

Intensive care is an important unit for the care of patients suffering from serious diseases.^[1] It consists of an integrated medical team headed by a specialized physician (head of the department), a nurse, a physiotherapist and an anaesthesiologist, all of whom are there to monitor the patient's condition as he enters the hospital and to leave.^[2] Serious cases such as heart failure, car accidents, amnesia, sudden high blood pressure, acute asthma, heart attack, acute hyperglycaemia, severe haemorrhagic, Severe Pneumonia, complications of surgery, multiple and multiple fractures, cerebral thrombosis, burns, Falling from high places.^[3,4,5,6,7] In addition to the patient to enter intensive care must pass through the accident room or through the wing of surgery or internal and review of the head of intensive care.^[8] The procedure of admission depends on condition of the patient and, accordingly, tests and tests are carried out and the necessary radiation is done, and the competent doctor reviews the case and accordingly, the types of treatment and additional analysis required are determined.^[9] Therefore, The nurse is a key, important and influential factor that takes care of the patient for 42 hours and monitors the devices connected to the patient (heart-oxygen monitor - in and out fluids - feed cycle) and writing reports.^[10] And explain the situation after discussion with the doctor's to the patient, indicating that this requires that the nurse is highly qualified and skilled.^[10] This study aimed to identify the cause of admission to ICU among patients in Baghdad /Iraq.

METHODOLOGY

The design was a cross-sectional study conducted in the intensive care unit in neurosurgery teaching hospital in Baghdad. All the cases admitted from January 2018 to the end of June 2018 was enrolled in this study. We included all the cases of various reasons. Semi-structured questionnaire was used to collect the information from the records. The sample size was 250 cases. Data was described by using descriptive statistics such as frequency, percentage, Fisher chi-square, and p. value. STATA version 14 statistical package was used to analyse the data. Ethical clearance was obtained from the Ministry of Health/ Iraq. Oral and written informed consent was obtained from the relative of the participant because of the participants are unconscious.

RESULTS

Two hundred and fifty participants, the highest frequency of cases 134/250 (53.6%) still in the age > 40 years. More the half of cases 151/250 (60.4%) are males, also the majority 170/250 (68%) were unemployed [table1]. In the same table show that the highest frequency of admission causes of this unit 78/250 (31.2%) was a road traffic accident, followed by hypertension, diabetes, complication after surgery and gunshot. (17.2%), (16.8%), (15.6%) and (8.8%), respectively [Table1]. There is a significant relationship between the causes of admission and variables at p. value less than 0.05[Table1].

Table 1: Characteristics of variables by causes of admission.

| Variables | Causes of admission | | | | | | | Total |
|---|---------------------|------------|----------------------------|------------|----------|---------------|------------|------------|
| | Hypertension | Diabetes | Complication after surgery | Gunshot | Falls | Heart failure | RTA | |
| | F. % | F. % | F. % | F. % | F. % | F. % | F. % | |
| Age groups years | | | | | | | | |
| <40 | 19 16.4 | 11 9.5 | 17 14.7 | 9 7.8 | 7 6.0 | 2 1.7 | 51 43.9 | 116 100 |
| >40 | 24 17.9 | 31 23.1 | 22 16.4 | 13 9.7 | 3 2.2 | 14 10.4 | 27 20.1 | 134 100 |
| Total | 43 17.2 | 42 16.8 | 39 15.6 | 22 8.8 | 10 4 | 16 6.4 | 78 31.2 | 250 100 |
| Fisher chi-square statistic is 11.04 and the p-value is .026125. The result is significant at p < .05. | | | | | | | | |
| Gender | | | | | | | | |
| Male | 17 11.3 | 13 8.6 | 24 15.9 | 19 12.6 | 6 4.0 | 7 4.6 | 65 43.0 | 151 100 |
| Female | 26 26.3 | 29 29.3 | 15 15.2 | 3 3.0 | 4 4.0 | 9 9.1 | 13 13.1 | 99 100 |
| Total | 43 17.2 | 42 16.8 | 39 15.6 | 22 8.8 | 10 4 | 16 6.4 | 78 31.2 | 250 100 |
| The fisher chi-square statistic is 37.6 and the p-value is < 0.00001. The result is significant at p < .05. | | | | | | | | |
| Occupation | | | | | | | | |
| Employee | 12 15 | 21 26.3 | 22 27.5 | 5 6.3 | 2 2.5 | 7 8.8 | 11 13.8 | 80 100 |
| Unemployed | 31 18.2 | 21 12.4 | 17 10 | 17 10 | 8 4.7 | 9 5.3 | 67 39.4 | 170 100 |
| Total | 43 17.2 | 42 16.8 | 39 15.6 | 22 8.8 | 10 4 | 16 6.4 | 78 31.2 | 250 100 |
| The fisher chi-square statistic is 25.9 and the p-value is .000033. The result is significant at p < .05. | | | | | | | | |

According to outcomes and causes of admission, the highest frequency 103/250 (41.2%) they died during the period of stay in the ICU, followed by 91/250 (36.4%), they converted to another unit in the hospital and 56/250 (22.4%), they recovered over the period of stay in this

unit [table 2]. There is a significant relationship between the causes of admission and the outcomes at the p. value less than 0.05 [Table2].

Table 2: Distribution of cases by causes of admission and outcomes.

| Outcomes | Causes of admission | | | | | | | Total |
|-------------------------|---------------------|------------|----------------------------|------------|----------|---------------|------------|------------|
| | Hypertension | Diabetes | Complication after surgery | gunshot | Falls | Heart failure | RTA | |
| | F. % | F. % | F. % | F. % | F. % | F. % | F. % | |
| Improvement | 9 16.1 | 7 12.5 | 11 19.6 | 7 12.5 | 2 3.6 | 3 5.4 | 17 30.4 | 56 100 |
| Convert to another unit | 10 11.0 | 20 22.0 | 17 18.7 | 10 11.0 | 4 4.4 | 7 7.7 | 23 25.3 | 91 100 |
| Death | 24 23.3 | 15 14.6 | 11 10.7 | 5 4.9 | 4 3.9 | 6 5.8 | 38 36.9 | 103 100 |
| Total | 43 17.2 | 42 16.8 | 39 15.6 | 22 8.8 | 10 4 | 16 6.4 | 78 31.2 | 250 100 |

The fisher chi-square statistic is 79.1 and the p-value is < 0.00001. The result is significant at p < .05.

DISCUSSION

This study aimed to identify the causes of admission to ICU among patients. Previous studies confirmed that the age has a relationship with the reason of admission to intensive care unit especially the adults and the elderly people. In our study, we found that the majority of cases 53.6% of entry were for the age of more than 40 years and the reasons for admission varied according to the patient's condition. Compared with another result from US^[9], they found the same our result. This refers to the most cases are suffering from the same condition.

In some studies they found a difference between gender as most of the admittance was for males more than females and this also has a relation to the causes and incidents experienced by both gender.^[11] In our study, the number of cases admitted the ICU was men more than the female cases. Compare with a result from Columbia.^[12] The authors found the male cases are admitting to ICU more than female. This is refers to the males are more susceptible to disease and accidents than others, especially car accidents.

Regarding occupation, some accidents are related to the type of occupation and the extent of stress that the patient is exposed to during the period of work. In our study, we found that there is a relationship between the reason for entry to ICU and occupation and also that the majority of patients 68% do not have a fixed job. Compared to another study from Australia^[13] and Candia^[14], the authors found that the most cases admitted of ICU were

retired and students. This difference due to different the lifestyle and culture between countries.

In addition, the deterioration of the economic situation, health and security in general, the absence of law and awareness which is increased the incidence of accidents, especially among adults, and this negatively affected the rate of entry and death. But the common is the road traffic accident. In our study, the highest frequency of admission causes of ICU 31.2% was a road traffic accident, followed by hypertension, diabetes, complication after surgery and gunshot. (17.2%), (16.8%), (15.6%) and (8.8%), respectively. Compared with other studies from India^[15,16], Iran^[7], Iceland^[6], France^[17] and America^[18], the reasons for admission of intensive care unit vary among countries according to lifestyle and culture among countries.

The outcomes are related to the reasons for admission; the type of treatment, and the services which are received by each patient, and it varies from case to case.^[19] In our results, we found that the majority died during their stay in the care room, which is similar to the study found from America.^[20] This similarity is due to the fact that most cases have the same reasons and characteristics of the patient.

CONCLUSIONS

Majority of cases are males, unemployed. A road traffic accident is a major cause of admission, followed by the chronic disease, complication after surgery and gunshot. There are a significant relation between age, occupation, gender, outcomes and the causes of admission at p. values less than 0.05.

Recommendation

WE need further research on this field to decrease the mortality and morbidity among people.

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