(KAJ) Kurdistan Academicians Journal, March2007, 5(1) part A (23-33)
گۆڤاری ئەکادیمیانی کوردستان ,ئەوروزی ۲۷۰۷ ئازاری ۲۰۰۷ ,بەرگ ٥ ژ(١) بەشی A لاپەرە (٢٣-٣٣)

Trends in Admission and Mortality in the Medical Wards in Sulaimani General Teaching Hospital

Mohammad O .Mohammad*, Nasih Othman, Sherko A. Omer*****
* Department of Medicine, College of Medicine, Sulaimani University
** Department of Community Medicine, College of Medicine, Sulaimani University
*** Department of Microbiology, College of Medicine, Sulaimani University
Kurdistan Region / Iraq

Abstract

This retrospective study was done to investigate the trends of admissions and deaths in the medical wards of the Sulaimani General Teaching Hospital during the entire year of 2000. There were 23864 admissions and 554 deaths data for which were transcribed from the hospital records and individual patient files. The mean daily admission for the whole year was 65.4; lowest in January (36.9) and highest in July (114.6). 43.5% of admissions were males and 56.5 % were females (P< 0.001). Overall hospital death rate was 2.3% and the risk of death in males was 1.7 compared to females (95% confidence interval 1.45-2.05, P < 0.001). Death was also significantly associated with season; risk ratio of death in winter was 2.59 compared to summer (95% confidence interval 2.02-3.32, P < 0.001). Age group 60-69 years contributed by 29.1% to the total number of the dead which was 5.75 times the share of age group 30-39 years (P < 0.001). The main causes of death were cardiovascular diseases (38.6%), stroke (24.7%), infections (12.6%) and malignancies (6.5%). Myocardial infarction alone accounted for 23.3% of all deaths. The study indicates that admissions are most in summer and least in winter but morality is highest in winter and lowest in summer probably because more severe cases tend to be admitted during the cold season.

Keywords: Admission, in-hospital mortality, medical illness, Sulaimani.

Introduction

Analysis of mortality data was one of the leading achievements in epidemiology and the United Kingdom was one of the first countries to collect mortality data where annual figures have been produced since 1838 [1]. Such figures can tell us the major causes of death in the population and point to any possible trends over time. In the developed countries, there have been striking changes in trends of the leading causes of death towards chronic non-communicable diseases such as cardiovascular and cerebrovascular diseases, malignancies and chronic obstructive lung diseases pushing the infectious diseases further down the list [2-4]. There is accumulating evidence that the same trends are progressively occurring in many developing countries [5] and tobacco has emerged as the leading risk factor for such changes though poor diet & physical inactivity may soon take tobacco's place as the leading cause of death [6].Mortality rate in different hospitals and in the same hospital during different periods of time may not be the same. In hospital death rates are calculated on the basis of deaths that occur within 30 days of admission or surgery [7]. In-hospital mortality may be related to factors related to circumstances before and during admission, type of care provided to the patient in hospital and the arrangements of discharge [8].

Reliable information on causes of death is essential for the development of national

*E-mail: dr_m_omer@yahoo.com

health policies and prevention of disease and injury yet certified information is only available for 30% of the estimated 50.5 million deaths that occur each year worldwide[9]. Research of hospital mortality can help identify the major risk factors within these groups in order to provide evidence for planning interventions. Understanding the patterns of admission to hospitals are also very important to health planners and can help them be more prepared and respond more efficiently and timely to the needs of the population in terms of hospital beds and facilities. To date and to our knowledge there have been no studies on the trends of admission and mortality of this kind in Kurdistan. Aim of this study was to investigate these areas and try to provide some quantitative data about the patterns of admission and mortality in the hospitalized patients for medical reasons.

Patients and Methods

This retrospective study of hospital data was done during the period between May to November 2005. The aim of the study was to provide quantitative data about the patterns of admission and mortality in patients hospitalized for medical reasons.

Sulaimani General Teaching Hospital is a referral hospital with capacity of 320 beds exclusively for medical admissions including coronary care units. Surgical, pediatric, obstetrical and gynecological cases are not admitted in this hospital. The hospital receives patients from inside and outside Sulaimani city from a catchment's population of 1.5 million.

A team of trained health staff reviewed records of the hospital for the entire year of 2000 from January 1st till December 31st. Data about total admissions, admissions by months and by were extracted. Detailed data were extracted from the patients' files for all those patients who were admitted during that year and had died in hospital. Such data included demographic information as well as data about the current admission and direct cause of death.

The cause of death was transcribed and recorded as written on the patients file. All deaths in our study were certified in the hospital and no single case was sent for autopsy.

Statistical analysis: The data was transcribed into a standard form by the trained health staff and later entered into the computer. Analysis was done in Strata for Biostatistics [10]. For the quantitative variables means and 95% confidence intervals were calculated and for comparison of proportions Chi-square and the corresponding P values were calculated. * Stratum proportion divided by the lowest proportion in strata.

Results

Total of 23864 patients were admitted to the medical wards during the year 2000 of which 10376 (43.5%) were males and 13488 (56.5%) were females (see table 1). This difference in total admissions between males and females was statistically significant ($P < 0.001$).

Admissions also varied by month and season. The highest number of admission was in July comprising 14.9% of all admissions with an average daily admission rate of 114.6 compared to the lowest in January which comprised only 4.8 of all admissions with an average daily admission rate of 36.9 (table 2). The mean daily admission for all the year was 65.4.

In relation to season, the highest admission was in summer comprising

Table 1: Total and proportion of male and female admissions and deaths

Sex	Admissions Number (%)	Deaths Number (%)	Death rate %	Risk ratio	95% CI*	P value
Male	10376(43.5)	316(57)	3	1.73	1.45-2.05	< 0.001
Female	13488(56.5)	238(43)	1.8			
Total	23864(100)	554 (100)	2.3			

** 95% confidence interval*

Table 2: Admissions, admission rate; deaths, death rate and death risk ratio for different months of the year

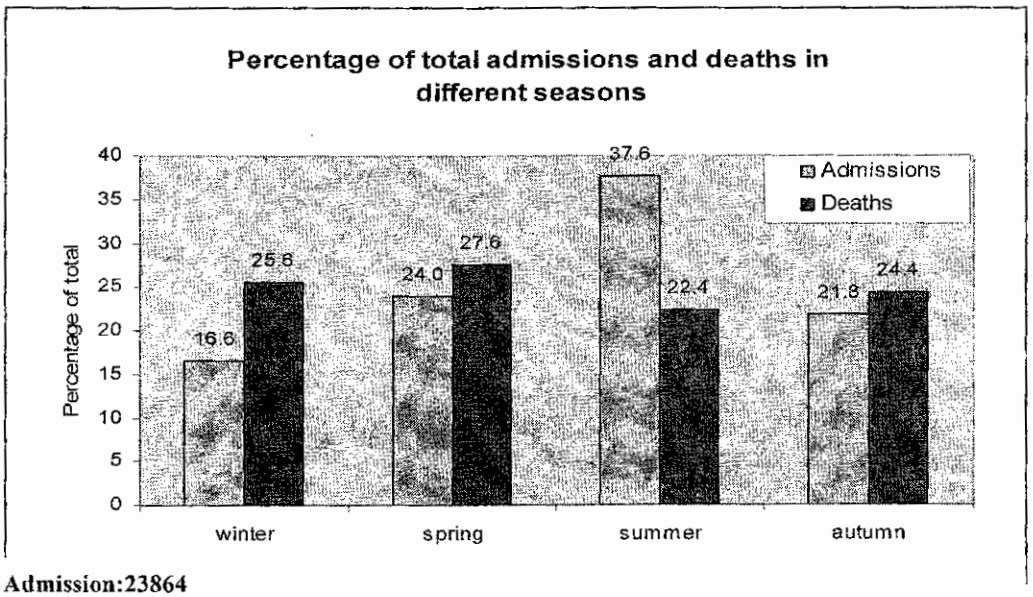
	Admissions		Deaths				
Month	Number (%)	Rate/day	Number	Rate %	Risk ratio	95% CI*	P value
January	1144(4.8)	36.9	49	4.3	3.9	2.5- 6.1	< 0.001
February	1365(5.7)	47.1	44	3.2	2.9	1.9-4.6	< 0.001
March	1459(6.1)	47.1	49	3.4	3.1	2-4.8	< 0.001
April	1678(7)	55.9	51	3.0	2.8	1.8-4.3	< 0.001
May	1882(7.9)	60.7	53	2.8	2.6	1.7-4	< 0.001
June	2168(9.1)	72.3	49	2.3	2.1	1.3-3.2	< 0.001
July	3554(14.9)	114.6	39	1.1	1.0*		
August	3280(13.7)	105.8	46	1.4	1.3	0.8-2	0.26
September	2141(9)	71.4	39	1.8	1.7	1.04-2.7	0.03
October	2006(8.4)	64.7	47	2.3	2.1	1.4-3.4	< 0.001
November	1730(7.2)	55.8	48	2.8	2.5	1.6-4	< 0.001
December	1457(6.1)	47.0	40	2.7	2.5	1.6-4	< 0.001
Total	23864(100)	65.4	554	2.3			

** Baseline category*

Table 3: Admissions, admission rate; deaths, death rate and death risk ratio for different seasons of the year

	Admissions		Deaths				
Season	Number (%)	Rate/ day	Number	Rate %	Risk ratio	95% CI*	P value
Winter(Jan-Mar)	3968(16.6)	43.6	142	3.6	2.59	2.02-3.32	< .001
Spring(Apr-Jun)	5728(24)	62.9	153	2.7	1.93	1.52-2.47	< .001
Summer(Jul-Sep)	8975(37.6)	97.6	124	1.4	1.0**		
Autumn(Oct-Dec)	5193(21.8)	56.4	135	2.6	1.88	1.46-2.42	< .001
Total	23864(100)	65.4	554	2.3			

** 95% Confidence interval*
*** Baseline category*



Admission:23864
Mortality:554

Fig1:Percentage of total admission and death in different seasons of the year

7.6% of all admission with an average admission rate of 97.6 compared to the lowest in winter comprising 16.6% of all admissions with an average daily admission rate of 43.6 (table 3). This variation in season was highly significant at P< 0.001. This difference in the proportion of admissions and deaths in the different seasons of the years is more clearly seen graphically (figure 1).

The total number of those who died in hospital during 2000 was 554. Of this number 316 (57%) were male and 238 (43%) were female (table 1). Death rate among the male admissions was 3% while it was only 1.8% among the female dmission giving a male to female risk ratio of 1.73 (95% confidence interval 1.45-2.05), a highly significant difference at P< 0.001. The age of all those who died ranged from 13 to 101 years with a mean of 57.8 years (95% confidence interval 56.3-59.3). The mean age for males was 59.1 years (95% confidence interval 57.2-61) and for females it was 56 years (95% confidence interval 53.6-58.4).This difference in mean age of the males and females who had died was statistically significant (P=0.04). The length of stay in hospital for those who died ranged from 1 to 30 days with the mean length of 3.4 days. There was no statistically significant difference between the length of stay for males and females. Death rate for all admissions was 2.3%. Death rate varied in different months and ranged from 1.1% in July to 4.3% in January.

Comparing individual months to July, there was a significant difference in death risk ratio for all months except for August but the highest ratio was for January 3.9(95% confidence interval 2.5-9, P < 0.001). See table 2 for risk ratio for other months In relation to season, death rate was highest in winter (3.6%) and lowest in summer (1.4%). Spring and autumn had similar rates (2.7%, 2.6% respectively).

The difference in death rate was highly significant between summer and the other seasons as indicated by the risk ratio (table 3). Compared to summer, death risk ratio for winter was 2.59 (95% confidence interval 2.02-3.32, P< 0.001), for spring it was 1.93 (95% confidence interval 1.52-2.47, P< 0.001) and for autumn it was 1.88 ((95% confidence interval 1.46-2.42, P< 0.001). Proportional mortality rates were variable across different 10-year age groups (table 4). The highest proportion of those who died were people aged 60-69 (29.1%) while the lowest proportion occurred in people aged 30-39 (5.1%). This difference was highly significant (risk ratio 5.75, 95% confidence interval 3.8-8.9, P< 0.001).

Causes of death and the proportional mortality form each cause are shown on table 5. Cardiovascular diseases account for the majority of deaths in medical wards (38.6%) followed by cerebrovascular accidents (stroke) which accounts for 24.7% of the deaths. Infections come in the third place with 12.6% and malignancies in the fourth place with 6.5% of deaths.

Within the cardio vascular deaths myocardial infarction alone accounts for 60.3% of deaths followed by heart failure (17.3%). Within the infectious causes, gastroenteritis accounts for 51.5% of the deaths followed by lower respiratory infection (22.9%). Leukemia accounts for 38.9% of hospital deaths from malignancies followed by brain tumors which account for 19.4% of malignancy deaths. Myocardial infarction is the single main cause of death in medical wards accounting for 23.3% of all deaths followed by heart failure (6.7%) and gastroenteritis (6.5%).

Table 4: All deaths stratified by age group and sex

	Male deaths	Female deaths	All deaths		
Age band	Number (%)	Number (%)	Number (%)	Ratio*	P value
13-19	8(3.4)	14(4.4)	22(4)**		
20-29	16(6.7)	13(4.1)	29(5.2)	1.04	
30-39	10(4.2)	18(5.7)	28(5.1)	1***	0.9
40-49	31(13)	27(8.5)	58(10.5)	2.03	0.001
50-59	45(18.9)	51(16.1)	96(17.3)	3.43	< 0.001
60-69	67(28.2)	94(29.7)	161(29.1)	5.75	< 0.001
70-79	52(21.8)	68(21.5)	120(21.7)	4.29	< 0.001
80-	9(3.8)	31(9.8)	40(7.2)**		
Total	238(100)	316(100)	554(100)		

* Stratum proportion divided by the lowest proportion in strata
** Ratio not calculated because age band is not equal to the rest
** Baseline proportion

Table 5: Different causes of death and their proportional mortality individually and grouped into major categories

Cause of death	number of deaths	Proportional mortality	
		% of total	% of category
All causes	554	100	
Cardiovascular	214	38.6	
Myocardial infarction	129	23.3	60.3
Heart failure	37	6.7	17.3
IHD	17	3.1	7.9
Cardiac shock	9	1.6	4.2
Arrhythmia	6	1.1	2.8
Pulmonary edema	5	0.9	2.3
Other(congenital, valvular, cardiomyopathy)	11	2.0	5.1
Cerebrovascular accidents(stroke)	137	24.7	
Infections	70	12.6	
gastroenteritis	36	6.5	51.4
Lower respiratory infections including pneumonia	16	2.9	22.9
Pyogenic meningitis	6	1.1	8.6
Tuberculosis	6	1.1	8.6
other(septicemia, tetanus, typhoid)	6	1.1	8.6
Malignancies	36	6.5	
leukemia	14	2.5	38.9
brain	7	1.3	19.4
gastrointestinal	5	0.9	13.9
lymphoma	4	0.7	11.1
other (breast, kidney, bronchus)	6	1.1	16.7
Renal causes	35	6.3	
Respiratory failure, asthma, pulmonary embolism	22	4.0	
Diabetes Mellitus	14	2.5	
Liver	12	2.2	
Less frequent causes	14	2.5	

Discussion

In this study information about the admissions was taken from summery hospital records and information about the patients who had died in hospital was taken from patient's files. Patients admitted to this hospital must be over 12 years of age and admission is restricted to medical cases (cold and emergency cases). Surgical, trauma, obstetrical, gynecological and pediatric cases are admitted to other hospitals. The results show that more females are admitted to hospital compared to males (56.5% vs. 43.5%). The number of admissions also varies significantly across the year. Overall all admission rate was 65 per day and 74 patients per bed per year which is quite high compared to studies elsewhere [11]. The biggest number is in summer peaking in July with 15 admissions per day which means that there are less than 3 days available for each patient to stay in hospital. It was not possible in this study to identify the types of admissions, but judging from the rapid turnover and the low mortality, it may be fair to assume that most admissions are acute diseases which recover quickly or are discharged rapidly due to the heavy burden on the hospital such as gastroenteritis and infectious diseases. In winter, on the contrary there are less admissions with the minimum daily admission in January (37 admissions per day) i.e. one third of the summer rate. The cause of this may be actual difference in the patterns of disease in the cold season; unwillingness of patients to get admitted due to the unfavorable weather-related hospital and access circumstances particularly those living farther away from the city center; unwillingness of doctors to admit with the same threshold as summer months due to the unfavorable hospital circumstances particularly in terms of heating.

Overall death rate was 2.3% and death rate was significantly more in males compared to females (3% vs. 1.8%, RR 1.73). The reason for this difference may need further research but possible explanation may be sought in the two main causes of death, cardiovascular diseases and stroke, which are more common in males. Similar studies elsewhere that we have retrieved report death rates between 6% and 25% [11-16]. Clearly in-hospital mortality depends on many circumstances which may vary considerably among hospitals. Death rate was variable across the months and seasons of the year with the highest rate in January and the lowest in July (4.3% vs. 1.1%, RR 3.9, $P< 0.001$). As a season winter had a higher death rate than summer (RR 2.59, $P< 0.001$). This significantly higher death rate in the cold season coincides with a lower admission rate which may indicate a pattern in the patient-doctor behavior in relation to admission as well as indicating a possible difference in the patterns of disease during different seasons. Less severe diseases may be treated outside the hospital beds because of the doctors or patients judgment about the difficulties that hospitalization may pose to the patient or the family. Deaths in this study covered people aged 13 and above. We don't have data on the age of all admissions so we can not compare death rate among different age groups. But in terms of proportion of all deaths, age group 30-39 years contributed least to the deaths (5.1%) while the age group 60-69 years contributed most to the total deaths (29.1%).

From these results, we cannot make a fair comparison of mortality experience of these age groups. We can only conclude that there has been 5.75 times more deaths among the older age groups compared to the younger age group. The reason of this may lie in the difference in admission and mortality of the different age groups. The causes of death are informative. Cardiovascular diseases alone contribute by 38.6% to the hospital deaths. This figure highlights the existing fears that these diseases are rapidly increasing in Kurdistan but we must be careful in interpreting the figure. This is hospital mortality and while it does mean that a high proportion of deaths are due to diseases of the heart and vessels it does not mean that these diseases take a similar proportion or even a lead proportion of the overall mortality. Cerebrovascular accidents are the second major cause of death in hospitals. Infections, particularly gastroenteritis and lower respiratory infections are still major killers in our region. Malignancies come in the fourth place but it should be noted that many malignancies do not report to the medical wards such as many tumors of the gastrointestinal tract, breast and cervix. Leukemia is the most commonly treated malignancy in medical wards and in fact they represent the majority of cancer deaths in this study. Globally the three leading causes of death in the developing countries in the same year were ischemic heart disease, cerebrovascular accidents and lower respiratory infections [17] which correspond to the results of this study keeping in mind, however, that these two are not quite comparable as our data come from hospitals only and do not cover all morality experience of the population. The causes of death in this study have been taken form the patients files which usually only reports the immediate cause of death. It must be said that there is no standard way of reporting cause of death and it largely depends on the decision of the attending physician. Ischemic heart disease, for example, can cause infarction, arrhythmias, heart failure, pulmonary edema and cardiac shock which in turn may lead to death and hence be reported as the cause of death. While ischemic heart disease is not the only cause of the above end results. So it is important to report the underlying cause of death which is not always possible to get from routine hospital data.

Conclusions

In the medical wards, admission rate is significantly higher in summer and lowest during the winter months but mortality rate is significantly higher in winter and lowest during summer. More females are admitted but in-hospital death rates are significantly higher in males. The major causes of death in hospital are cardiovascular diseases, stroke, infections and malignancies. People aged 60-69 are more likely than any other age groups to die in hospital. The recommendations of this study fall under the following areas. Firstly awareness of these trends in admission and mortality can help better planning and preparedness of health authorities in order to provide better and timelier care to the inpatients in medical wards. Secondly, patient registration and hospital data organization require more systematic work and there is also need to improve and standardize recording the causes of death on patient files. Thirdly, this study has raised several questions about the causes of death, trends of admissions plenty of questions about

hospital mortality and difference in admission trends which needs more research. Finally, improvement and standardization of death registration is another area which needs more action as well as research.

References

1. Nicholas J. Wald, Patterns of mortality and morbidity. Text book of medicine, chapter 1, 12-17, 3rd edition, **1998.**
2. CDC. Top ten causes of death. National Vital Statistics Report, 48, Number 11(http://www.cdc.gov/nchs/data/nvs48_11.pdf)**2001**.
3. Statistics Canada. Death: shifting trends. Health Reports, **2003**,12, (3): 41-47.
4. Twombly R. Cancer surpasses heart disease as leading cause of death for all but the very elderly. *Natl Cancer Inst.* **2005**, 2; 97:330-1
5. Ben Romdhane H, Bougatef S et al. The first Tunisian cardiovascular diseases register: processes and results. *Rev Epidemiol Sante Publique*. **2004**; 52(6):558-64
6. Ali H. Mokdad JS et al. Actual Causes of Death in the United States 2000. *JAMA* **2004**, 10; 291(10): 1238-1245
7. MJ goldcare, M Griffith et al. In-hospital deaths as fraction of all deaths within 30 days of hospital admissions for surgery: analysis of routine statistics. BMJ **2002**; 324: 1069-1070
8. Bobbie Jacobson. Hospital mortality league tables. *BMJ* **2003**; 326: 777-778.
9. Murray CJ, Lopez AD. Mortality by cause for eight regions of the world: Global Burden of Disease Study. **2003.**
10. Stata for Biostatistics version 7. Stata Corp, College Station, Texas.**2006**
11. Ogun SA, Adelow OO et al. Patterns and outcome of medical admissions at the Ogun Sate University Teaching Hospital. *West Afr J Med.* **2000**; 19(4): 304-308.
12. De Escalante YB, Oncins TR et al. hospital mortality in internal medicine service of a local hospital. (Abstract in Pub-Med PMID: 7772684).**2002.**
13. Naraqi S, Gena M. Mortality at the medical wards of a university teaching hospital in Papua New Guinea: a study of 1242 admissions. *P N G Med J.* **1989**; 32(3):171-6
14. Motorras GP, Alonso LE et al. Mortality at an internal medicine department of a tertiary hospital. Rev Clin Esp. **1989**; 185(4):175-8. (Abstratct in Pub-Med PMID: 2608963).
15. Beguin C, France F et al. systematic analysis of in-patients circumstances and cuses of death: a tool to improve quality of care. *Int J Health Care.* **1997**; 9(6):427-33.
16. Del Rio Fernandez MC, Fernandez Rendo A et al. Mortality in an internal medicine department within a third level hospital: twenty years experience. *An Med Interna.* **1999**; 16(4):212-3 (Abstract in PubMed PMID: 9608063).
17. World Health Organization. World Health Report **2001**. Geneva: WHO, (www.who.int/whr).

(KAJ) Kurdistan Academicians Journal, March2007, 5(1) part A
گۆڤاری ئەکادیمیانی کوردستان ,ئەوروزی ٢٧٠٧ ئازاری ٢٠٠٧ ,بەرگ ٥ ژ(١) بەشی A

رەوتی داخل کردن و مردنی نەخۆش لە قاوشەکانی هەناوی نەخۆشخانەی گشتیی فیرکاریی سلێمانی.

محمد عمر محمد, ناصح عثمان, شێرکو علي عمر
کۆلیجی پزیشکی , زانکۆی سلێمانی, هەرێمی کوردستان / عێراق

پوختە

ئەم تۆێژینەوەیە ئەنجام درا بە مەبەستی لێکۆڵینەوەی رەوتی داخل کردن و مردنی نەخۆش لە قاوشەکانی هەناوی نەخۆشخانەی گشتیی فێرکاریی سلێمانی بۆ ساڵی ٢٠٠٠. بەگشتی لەو ساڵەدا ٢٣٨٦٤ نەخۆشی داخل کراوەو ٥٥٤ حاڵەتی مردن هەبووە کە زانیارییەکانیان لە تۆمارەکانی نەخۆشخانەو فایلی نەخۆشەکانەوە دەرهێنران. تێکڕای داخڵبوونی رۆژانەی نەخۆش بریتی بوو لە ٦٥,٤. وە تێکڕای داخڵبوون کەمترین بوو لە مانگی کانوونی دووەمدا(٣٦,٩) و زیاترین بوو لە مانگی تەموزدا(١١٤,٦). هەروەها ٤٣,٥٪ ی حاڵەتەکان نێرینە بوون و ٥٦,٥٪ مێینەبوون ($P < 0.001$).

ڕێژەی گشتیی مردن ٢,٤٪ بوو، مەترسیی مردن لە نێردا ١,٧ جار بوو لەچاو مێینەدا (95% confidence interval 1.45-2.05, $P < 0.001$).ڕێژەی مردن هاوپەیوەست بوو لەگەڵ وەرزدا بە جۆرێك لە زستاندا ٢,٥٩ ئەوەندەی هاوین بوو (95% confidence interval 2.02-3.32, $P < 0.001$). گروپی تەمەنی ٦٠-٦٩ ساڵ ٢٩,١٪ی هەموو مردنەکانی پێك دەهێنا کە ٥,٧٥ ئەوەندەی گروپی تەمەنیی ٣٠-٣٩ ساڵ بوو($P < 0.001$). گرنگترین هۆیەکانی مردن بریتی بوون لە نەخۆشییەکانی دڵ لوولەکانی خوێن(٣٨,٦٪) و جەڵتەی مێشك (٢٤,٧٪) و هەوکردن(١٢,٦) و شێرپەنجە(٦,٥٪). جەڵتەی ماسولکەی دڵ بەتەنیا ٢٣,٣٪ی هەموو مردنەکانی پێك هێناوە.

لەم تۆێژینەوەدا دەرەنجامی ئەوە دەکەین کەوا زیاترین حاڵەتی داخڵبوون لە هاویندا ڕووبداوە و کەمترینیش لە زستاندا. لەگەڵ ئەوەشدا ڕێژەی مردن لە زستاندا زیاتربووە وەك لە هاوین ئەمەش ڕەنگە لەبەرئەوە بێ لە وەرزی سەرمادا حاڵەتە زیاتر سەختەکان داخل دەکرێن.

(KAJ) Kurdistan Academicians Journal, March2007, 5(1) part A
گۆڤاری ئەکادیمیانی کوردستان ,ئەوروزی ۲۷۰۷ ئازاری ۲۰۰۷ ,بەرگ ۵ ژ(۱) بەشی A

اتجاهات دخول المرضى و نسبة الوفاة في ردهات الباطنية في مستشفى العام التعليمي في السليمانية.

محمد عمر محمد, ناصح عثمان, شيركو علي عمر
كلية الطب, جامعة السليمانية, اقليم كردستان / العراق

الخلاصة

تم اجراء هذا البحث للتحقيق من اتجاهات دخول المرضى و الوفيات في ردهات الباطنية في المستشفى العام التعليمي في السليمانية لسنة ٢٠٠٠. كان هناك ٢٢٨٦٤ حالة دخول و ٥٥٤ حالة وفات و التي تم استخلاص بياناتها من سجلات المستشفى و طبلات المرضى. كان معدل الدخول اليومي للمرضى ٦٥.٤ و كان المعدل الأدنى في شهر كانون الثاني(٣٦,٩) و المعدل الأعلى في شهر تموز(١١٤,٦). شكل الذكور ٤٣,٥٪ من حالات الدخول و الأناث ٥٦.٥٪ ($P < 0.001$).كانت نسبة الوفيات الأجمالية ٢,٤٪ و خطورة الموت كانت اعلى ١,٧ ضعفا بين الذكور مقارنة بالأناث (95% confidence interval 1.45-2.05, P < 0.001). كانت نسبة الوفيات مرتبطة بفصول السنة. اذ كانت ٢,٥٩ ضعفا في الشتاء مقارنة بالصيف (95% confidence interval 2.02-3.32, $P < 0.001$).

ساهمت المجموعة العمرية ٦٠-٦٩ عاما بـ ٢٩,١٪ من اجمالي الوفيات و التي كانت ٢,٧٥ضعفا مقارنة بمساهمة المجموعة العمرية ٣٠-٣٩ عاما.($P < 0.001$). كان اهم اسباب الوفاة امراض القلب و الأوعية الدموية(٣٨,٦٪) و الجلطة الدماغية(٢٤,٧٪) و الالتهابات(١٢,٦٪) و حالات السرطان(٦,٥٪). ساهمت احتشاء العضلة القلبية منفردا بنسبة ٢٣,٣٪ من اجمالي الوفيات. نستنتج من البحث ان اكثر حالات الدخول يحدث في فصل الصيف و اقلها في الشتاء. وبالرغم من ذلك نرى ان نسبة الوفاة اعلى في الشتاء مقارنة بالصيف ربما لان الحالات الأكثر شدة تتم ادخالها اثناء الفصل البارد.

Received on 5/1/2006 Accepted 17/2/2007
وەرگیراوە لە ٢٠٠٦/١/٥ پەسندکراوە لە ٢٠٠٧/٢/١٧