THE TOP TEN CAUSES OF DEATH AMONG GHERIAN POPULATION (2005)

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ABSTRACT

Data on mortality by age, sex, and cause are primary inputs for assessing population health status, and a good evidence for the effectiveness of health policy in combination with other epidemiology and socioeconomic indicators. The aim of this study is to illustrate the top ten causes of deaths in one region of Libya, in order to known the size of problems in our community and to enlighten the policy maker about the serious public health problems which can to put strategy to reduce the magnitude of preventive death. This study was conducted at Gherian teaching hospital (2005), it is a retrospective descriptive study. The data were collected from statistic health department from death certificates. The sample size was 220 death certificates. The total admissions in the hospital were 9978 patients in 2005. The causes are as the following: cardiac diseases, cerebral stroke, road traffic accidents, cancer, chest infection, renal failure, head trauma, birth asphyxia, liver cirrhosis and bronchial asthma. The unknown disease represents 8.6% and other disease are (14.1%). In comparison the results of this study with others study in the world, we observed differences in the rank of causes of death due to genetic, life style, environment, health situation, socioeconomic status…etc.

KEY WORDS:
Top causes of death, cardiac disease, Death certificate, Unknown causes, Limitation in diagnostic.

INTRODUCTION

Data on mortality by age, sex, and cause are primary inputs for assessing population health status, and a good evidence for the effectiveness of health policy in combination with other epidemiology and socio-economic indicators [1].

Measuring how many people die each year and why they died is one of the most important task of the health authority in all over the world for assessing the effectiveness of a country health system [2].

Ischemic heart diseases, stroke, lower respiratory and chronic obstructive lung diseases have remained the top major killers during the past decades in the world [3].

In Libya, the five risk factors that accounts for the most diseases burden are dietary risks, high blood pressure, high body mass index, high fasting plasma glucose and low physical inactivity [4].

In 2012, an estimated 56 million people died worldwide. Non communicable diseases were responsible for 68% of all deaths globally in 2012, up from 60% in 2000 [5].

About 6.6 million children died before reaching their fifth day in 2012; almost all (99%) of these deaths occurred in low and middle income countries. The major killers of children aged less than 5 years were prematurity, pneumonia, birth asphyxia and birth trauma and diarrheal diseases. Malaria was still a major killer in sub-Saharan Africa, causing about 15% of under 5 deaths in the region [5].

About 44% of deaths in children younger than 5 years in 2012 occurred within 28 days of birth (the neonatal period). The most important cause of death was prematurity which was responsible for 35% of all deaths during this period [5].

The major causes of death and its burden have not been appropriately identified in Libya. Thus, the aim of this study is to highlight the major causes of death among Gherian population to help policy-makers to draw strategy to reduce the preventable common causes of deaths in our community.

Subject & method

This study was conducted at Gherian teaching hospital (2005) and it is the only teaching hospital in the area. It serves more than 250000 persons with a capacity of 450 beds. It was rebuilt in 1973.

The study is a descriptive study and was done retrospectively. The data were collected from statistic health department from death certificates. All documented deaths in the department in 2005 were included in the sample. The nomenclature of death causes was taken as found in death certificates.

All death certificates were reviewed, arranged, summarized and analyzed by age, sex, causes of death, place of death. etc. All data was analyzed by using Excel 2007.

Data was presented as frequency, percentage, mean, SD and illustrated in form of tables and figures.

RESULTS

(Table 1), shows the distribution of deaths according to sex. Total of 220 deaths were registered in 2005,137 males (63.3%) and 83 females (37.7%). The total admission in the hospital were 9978 patients in 2005 [6]. The crude death rate was 0.76 per 1000 in this study. The percent of death among the admission was 2.2% in 2005.

The percent of death in this study represent 1.3% from total death in Libya in 2005.

The mean age of death was 56.7 years (SD ± 23.2). Illustrates the top ten causes of death among Gherian

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population. It represented 77.2% from the total deaths. The top ten causes of death as seen in (table 1), were cardiac diseases, cerebral stroke, road traffic accident, cancer, chest infection, renal failure, head trauma, birth asphyxia- liver cirrhosis and bronchial asthma respectively.

However, the other causes of death formed 14.1 % of total deaths and the cause reported as unknown in 8.6 % of deaths (table 1).

(Table 1) The top ten causes of death among Gherian population by gender

Causes	Male	%	Female	%	Total	Total %
Cardiac diseases	49	22.3	28	12.7	77	35
Cerebral stroke	20	9.1	18	8.2	38	17.3
Road trafic	11	5	2	0.9	13	5.9
Cancer	8	3.6	2	0.9	10	4.5
Chest infection	6	2.7	2	0.9	8	3.6
Renal failure	3	1.4	5	2.3	8	3.6
Head trauma	4	1.8	1	0.45	5	2.3
Birth asphyixa	4	1.8	-	-	4	1.8
Liver cirrhosis	2	0.91	2	0.9	4	1.8
Bronchial asthma	1	0.45	2	0.9	3	1.4
Unknown	14	6.4	5	2.3	19	8.6
Other causes	15	6.8	16	7.3	31	14.1
Total	137	63.3	83	37.7	220	100

The age of deaths ranged from 0 to older than 86 years, deaths was classified and grouped, (Table 2), indicates the distribution of death according to age.
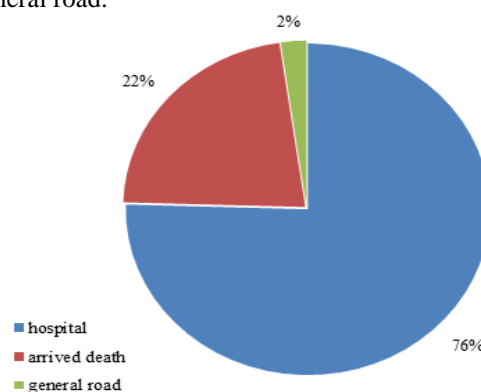
(Table 2) Distribution of deaths among Gherian population according to age group

Age in years	Numbers	%
0-<6	14	6.3
6-<11	7	3.2
11-<16	3	1.4
16-<21	8	3.6
21-<26	4	1.8
26-<31	14	6.3
31-<36	5	2.3
36-<41	3	1.4
41-<46	7	3.2
46-<51	7	3.2
51-<56	8	3.6
56-<61	10	4.5
61-<66	14	6.4
66-<71	29	13.2
71-<76	20	9.1
76-<81	27	12.3
81-<86	22	10.0
86+	18	8.2
Total	220	100

It clear from the table that the high frequency of death occurred between 66-70 years (mode =29). This age group represented 13.2 % of the total death and the percentage of death among preschool children was 6.3% as seen in (table 2).

(Figure 1), presented the places of death. As it can be seen in the table that 75.6 % of death were oc-

curred at hospital and 2.3% of death occurred at the general road.

(Figure 1) Distribution the places of death among Gherian population

DISCUSSION

Studies on major causes of death in Libya are very rare. There are many reasons for the variation in causes of death among the countries due to dissimilarity among risk factors of death in different countries.

Measuring how many people die each year and why they died is one of the most important along with gauging how diseases and injuries are affecting people and for assessing the effectiveness of a country health system [1].

This study identified the top ten causes of death in one region of Libya to enlighten the policy maker about the serious public health problems in the community and to put strategy to reduce the causes of preventive death among population.

The present study showed that cardiac diseases is the top causes of death in Libya.

The results of this study showed that the top ten causes represented 77.2% from the total death, other causes formed 14.1% and unknown causes represent 8.6%. However, those patient died with undetermined causes in this study reflects certain diagnostic limitations.

The crude death rate was 0.76 per thousand in the studied area. However, the percent of death among admission patient was 2.2%. The total admission patients in 2005 were 9978 patients [5].

In comparison the result of this study with other studies, regarding the causes of death we observed the differences between the ranking of the causes of deaths between the countries due to socioeconomic, environment, genetic, life style, health situation, risk factors …. etc.

In Egypt, the top causes of deaths were ischemic heart disease with 13.7% from the total death followed by stroke as the second cause of death with 10.5% [6], in this study the first causes of deaths were cardiac diseases with 35% from the total causes, followed by cerebral stroke with 17.3%.

Other studies in Tunisia recorded that ischemic heart disease is the first cause of death with 16.3%

from the total deaths [7]. The percent of deaths in Tunisia is half of the first cause of death in this study.

In Kuwait, the leading causes of death among male were ischemic heart diseases, traffic accidents and cancer. Meanwhile cancer, ischemic heart diseases and hypertension were more common in female [1].

In Jordan, the three leading causes of death were diseases of circulatory system, malignancies and accidents [8].

In Turkey, the first leading causes of death were ischemic heart diseases among male with 20.7% and female with 22.9%. The second leading cause was cerebrovascular disease with 14.5% in male and 15.7% in females [9].

The cerebral stroke as a cause of death was ranked as the second cause of death in this study and in Turkey. However the percentage in present study was lower than in Turkey (in male with 9.1%, female 8.2%).

In the national level (Libya), the top ten causes of death were: coronary heart diseases, stroke, road traffic accidents, diabetes mellitus, hypertension, influenza and pneumonia, lung diseases, lung cancer, kidney diseases and prostate cancer [7].

In Iranian population, it seems that cardiovascular diseases, motor vehicle accidents, cancers, intentional and unintentional injuries are the major causes of death [10].

In Sudan, the first cause of death was lower respiratory infection with percentage of 10.4%, followed by diarrheal disease with 8.8% [7].

In Saudi Arabia, the first cause of death was coronary heart disease with 24.34%, followed by stroke as second cause of death with 17.96% [7].

It is clear from the most studied in the world regarding the top causes of death that the cardiac diseases rank as the first cause of death in the world. The finding in this study regarding the first cause of death is similar to other studies mainly in rich country.

The conflicts between counties regarding the top causes of death are depended mainly on the genetic factors, environment, quality of health services, social economic status, risk factors and life style.

The top 10 leading causes of death in the US were: heart disease, cancer, chronic lower respiratory disease, accident, stroke, Alzheimer disease, diabetes, influenza and pneumonia, kidney disease and suicide [11].

The crude death rate as found in this study was 0.76 per 1000 in the studied area while the crude death rate in the national level was 4.08 per thousand in 2012[12].

The percent of death in this study represented 1.3% from the total death in Libya in 2005. However, the data in this study were collected from death certification from statistical department in Gherian teaching hospital and there is limitation in writing procedure of death certification.

Death certification, in Libya should be up dated according to the international standard and training programs for the physicians about the writing protocol of death certificates.

CONCLUSION

In conclusion, this study shows, the top ten causes of death, among Gherian population. The common causes of death were cardiac diseases, cerebral stroke, road traffic accidents, cancer, and chest infection.

Unknown causes of death in this study represented 8.6%, this leads to limitation in diagnostic side. Other causes of death in the present study were 14.1%.

RECOMMENDATION

1-The physician should be given training courses in writing death certification according to international standard (WHO) with coding system.

2-We noted in this study that certain death certificate recorded mode of deaths instead the cause of death. These issues should be handled.

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