Traffic mortality in year 2002 in Salahaddin governorate.

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Abstract :

Back ground :Traffic mortality is one of the major causes of death in the world.
In Iraq there an increase in number of imported vehicles. Motor vehicle injuries are increasingly being recognized as a growing public health issue in the developing world . Iraq is a developing country in East Asia where motor vehicle use has increased since independence
Methods: An analytic study conducted on cases of mortality which had been examined by forensic medicine in Salah –aldin Governorate in years 2002.
Result: The traffic mortality is the first cause of death in year 2002(48.32%).No one found use seat belt alcohols users are (2.89%).most of victims are among pedestrians and high death cause incidence are from chest injury .
Conclusion : Traffic mortality still regard as main cause of death .Safety instructions for driving should be considered .

key words: Traffic mortality ,Salahaddin ,2002

Introduction :

Multiple injuries are frequently observed over the whole body of traffic victims in medico –legal autopsy cases(1).Road traffic accidents are a major cause of death and injury to children ,and account for a quarter of all deaths in those of school going age in the United Kingdom(2).The road traffic accident (RTA) deaths are more than twice as frequent in France ,Australia ,and the USA as in the UK or the Netherlands ,but in developed countries steadily decreasing each year.In developing countries accident rates are increasing as traffic increases ,and they greatly exceed those of developed countries(3).Between 1987 and 1994,Swedish hospital admitted 37,871 persons (51,348 admission)who had been involved in (RTA)as drivers or passengers .There were 23,369 men and 14,502women involved .(4)A total of 3687 pedestrians fatalities were reported ,and 71% of these were to Mexico City residents .The rate for males was 10.6/100000 with a slight decrease in rate from 1994 to 1997 .For females ,the rate was 4.0/100000,(5)2000 at Tehran ,Crude mortality rate in men was nearly two times that of women (6.2%versus 3.8%).(6)Between March 1999 and 2000 Road traffic accidents are considered to be the second highest cause of mortality in Iran .The number of victims was 15486; of deceased individuals were male (79%),mostly aged 40 years or less (65%),and who were pedestrians or care occupants (62%). Following road traffic accidents ,57% of deaths occurred pre-hospital (7) from June 1998 to June 2002 at Islamabad at neurosurgery center, there were 315 post –traumatic deaths. RTAs contributed to 281 deaths while head injury was the cause of death in 268 patients .(8)The results revealed that during the period 1977-1998,the rates of RTA per 100,000 population declined in the UAE.(9)
At 2001 in Colombia Forty five fatalities were analyzed .the mean age of the victims was 34.7 years; males were more affected than females ,with a 3:1ratio.37%were pedestrians,26%motorcyclists,20%drivers,8.
6%cyclists and 8.6%passengers.65.1% of the road accidents occurred during weekends. The most common road accidents were either collisions or by running over.73% of the victims died within two hours after the motor-vehicle accident(10).WHO acts on road safety to reverse accident trends? Traffic accident kill 1.26 million people each year;2nd leading cause of death among those aged 15-29(11)All road traffic accident deaths that occurred in Singapore over a period of 1 year were reviewed. A total of 226 deaths occurred :82.3% of the victims were males. The median age was 31 years

.Blood alcohol was detected in 42 (18.7%)victims .pedestrians and pedal cyclists (20.6% and 11.0%,respectively).The relative risk of mortality between motorcyclists and motor car drivers was 18.8:1(12).

Subject and methods :

A descriptive study was conducted in Salah-aldin governorate at forensic medicine center .The study included 173 deaths in year 2002 as a result of traffic accidents. The information were recorded like the personal characteristics in addition to other information mentioned in the questionnaire in which related to epidemiology of deaths as a result of traffic accidents and the finding from autopsy.

Results :

The violence related deaths is increasing yearly .In year 2002 the number of registered violence related deaths is 358.It has been shown that the traffic accident mortality in year 2002 was 173 cases out of 358 deaths so it was the main cause of death. The result shows that about 48 % of all violence related deaths in year 2002 are caused by traffic accidents.

Table l (1) shows that the deaths as a result of traffic are more frequent among male 84% than female 16%(145&28 respectively).

From table (2)the most frequent fatalities are among pedestrians 50 .28%(87 victims),especially at group age (0-10)they are (35)victims from traffic mortality while the pedal cyclist deaths are the lowest ,thy are (3 victims only)represent 1.73% from traffic mortality.

Less traffic mortality is among the age group (41-50) they represent 13%(they are 22 victims mainly from collision accidents).

The deaths from collision & rollovers are at same rate 24%(41&42 victims respectively).

Also the study reveals that alcohol is found in 2.6 % of victims (5 dead persons 2of them are drivers 0,no seat belt users ,from the deaths only 27 injured persons have been hospitalized which represent 15.60% of cases ,table (3).

Fractures of the organs are revealed by table (4).Firstly the most affected organs are the limbs 65.31%(119 cases).They are mainly from pedestrians (76victims).Secondly is the fractured ribs 60.11%(104 cases)mainly from pedestrians (59 victims).thirdly fractured pelvis 44%&vertebra 45^% are (76&78 respectively).Lastly and less happen but the most deadly fracture is the fractured skulls which are (66cases)which represent 38% of traffic mortality mainly from the pedestrians.

Discussion :

There is an increase in number of violence related deaths. Traffic mortalities regard as first and main cause ,in Iran from 1999 to 2000 road traffic accident regard as second cause of deaths(7).

From table (1) we find that number of deaths among male 84%three times more than female 24% it is almost like that registered in Colombia at 2000 (10),while in Tehran it is two times more in crude mortality (6).

From table (2) the death in group (0-10) represents 20%from traffic mortality .Like that in UK where road traffic accident are a major cause of death and injury to children, and account for a quarter of all deaths in those of school going age(2).

Pedestrians mortality is 50% represent the high incidence rate while less rate pedal cyclist death 2% in comparison with Colombia ,pedestrian rate is 37%,cyclest rate is 8.6% (10).

Observing table (3),alcohol is found in 2.6%of victims ,in Singapore it is 18.7% of victims (12),while in USA rate is 40% in 2003 also no one of the fatalities is reported wearing seat belt ,in USA the rate of fatalities wearing seat belt is 41%(13).

The study documents that 15.6%(27 cases) died in hospital ,in Iran 57% of deaths occurred pre-hospital (7).between 1987&1994 Swedish hospitals admitted 37,871 persons who had been involved in (RTA) (4).

Table (4) reveals 119 cases of limb fractures highly incident in traffic fatalities mostly among pedestrians ,secondly affected organs are fractured ribs (104 cases),fractured pelvis are (76 cases) in Arizona in 119 patients from traffic there are 80 cases of limb fractures and 35 cases of pelvic fractures(1).

Fractured skull is (66 cases in 173 victims) mostly from pedestrians, in Utah within two years from 285 hospitalized accidental patients there were 109 cases of fractured

skull (13). While spine fractures are 78 cases mainly from rollover and pedestrian's deaths, In China Xinhu hospital for 10 years there were 145 traumatic patients hospitalized for thoracolumbar spine fractures (14).

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Table 1 show classification of victims according to age & sex

Age	Male	Female	Total
<10	23	12	35
11-20	21	4	25
21-30	33	X	33
31-40	29	3	32
41-50	19	3	22
> 50	20	6	26
Total	145	28	173
%	83.81	16.18	100

Table 2 Distribution of the type of accidents according to age group

Age	Pedestrian	collision	Rollover	Pedal cyclist	Total	%
1-10	25	5	5	X	35	20.23
11-20	31	7	4	2	26	15
21-30	10	8	14	X	32	18.49
31-40	14	8	10	X	32	18.49
41-50	8	9	4	1	22	12.71
>50	17	4	5	X	26	15
Total	87	41	42	3	173	100
%	50.28	23.69	24.27	1.73	100	

Table 3 Shows cases of admission, alcohol & seatbelt percentage among traffic victims.

Age	Victims	Hospital admission	Alcohol	Seatbelt
1-10	35	2	X	X
11-20	25	3	X	X
21-30	33	5	2	X
31-40	32	9	3	X
41-50	22	2	X	X
>50	26	6	X	X
Total	173	27	5	X

Table 4 Skeletal fracture distribution in the victims (more than fractured organ may be found in the same body)

	Victims	Skull	Ribs	Pelvis	Limbs	Vertebra
Pedestrians	87	43	59	64	76	49
Collision	41	14	15	9	19	3
Rollover	42	9	27	3	21	25
Pedal cyclist	3	X	3	X	3	1
Total	173	66	104	76	119	78