Study of Malignant tumors in Missan governorate/Iraq during period 2000-2009

Zainab A.J.R.AL-Ali
science college/Missan University
Wassan Jafaar Abriaheem
science college/ Missan University
Nidhal Abdulla Hashim
Technical Institute-Medical/Amara
Ahmed A.AL-Hussain
president health/ Missan

Abstract

This Study was performed to determine the number of malignant tumors its and percentage in Missan goveornate during the period from 2000 to 2009 according to age, sex ,type of organ affected and geographic area of occuience.

The study recorded the total number of malignant tumors led to death during 9 years from 2000-2009 about (2287) case ,considered male were affected more the female1256male,54.92%and 1031 female,45.08% .The age group highly affected was that of (51-60)year which recorded 503 case ,22.99% in comparison to other age groups and the age group of(over 91) year recorded the lower number of (22)case (0.96%). Digestive system cancer was h more affected system than other organs which recorded number of (337)case and percentage of 14.74% while the Not other wise specific(NOS) recorded the lower number of (25)case and percentage of 0.09%. The geographic area highly affected was AL-Amara city which recorded (1490)case and percentage of 65.15% in comparison with other sites in Missan governorate . the highest incidence was in the year 2006 were 419 cases were recorded and a percentage of 18.32% while the lower accidence was in 2009 were (111)case were recorded and a percentage of 4.85% of all cases recorded .

دراسة للأورام الخبيثة في محافظة ميسان للفترة (٢٠٠٠ ـ ٢٠٠٩)

زينب عبدالجبار رضا العلي
كلية العلوم /جامعة ميسان
نضال عبدالله هاشم
المعهد التقني- الطبي /العمارة
وسن جعفر إبراهيم
كلية العلوم /جامعة ميسان
احمد عبد الحسين الإبراهيمي
دائرة الصحة – ميسان

الخلاصة

أجريت هذه الدراسة لمعرفة نسبة الوفيات بالأورام السرطانية الخبيثة في محافظة ميسان خلال الفترة من ٢٠٠٠ لغاية ٢٠٠٩ وإعداد المتوفين بالمرض حسب الجنس والعمر ونوع العضو المصاب والمنطقة الجغرافية .

بينت الدراسة إن عدد الوفيات في محافظة ميسان خلال الفترة أعلاه قد بلغت (٢٢٨٧)حالة وبلغ عدد الذكور (١٢٥٦) حالة وبنسبة ٥٤،٩٢% وهي اعلي من عدد الإناث التي بلغت (١٠٣١) حالة وبنسبة ٤٥،٠٨% ،قد احتلت الفئة العمرية ٥١-٦٠ سنة المرتبة الأولى في عدد الوفيات إذ بلغت (٥٠٣) حالة وبنسبة ٢٢،٩٩% في حين كانت الفئة العمرية فوق ٩١ سنة هي الأقل في عدد الوفيات (٢٢) حالة وبنسبة

ISSN-1994-697X

٠،٩٦%،لقد سجلت إصابة الجهاز الهضمي اعلي إصابة مقارنة مع الأعضاء الأخرى إذ بلغت عدد الوفيات به (٣٣٧)حالة وبنسبة ١٤،٤٧% في حين كانت إصابة Not other wise specific (NOS) الأقل في عدد الوفيات (٢٥)حالة وبنسبة ١،٠٩%. إما الموقع الجغرافي الأعلى في عدد الوفيات فكان من نصيب مركز المحافظة(العمارة) إذ سجلت (١٤٩٠)حالة وبنسبة ٦٥،١٥% واقل المناطق فقد كانت في قضاء علي الشرقي بواقع (٢٠) وبنسبة ٠،٨٧% . سجلت الدراسة اعلي وفيات كانت تقع ضمن عام ٢٠٠٦ إذ بلغ عددها (٤١٩) حالة ونسبة ١٨،٣٢% إما اقل عدد في عام ٢٠٠٩ بعدد(١١١) حالة ونسبة ٤،٨٥%.

Introduction

Tumors an abnormal mass of tissue growth which is uncoordinated with that of the normal tissues , and persists in the tissue in the same excessive manner after cessation of the stimuli which evoked the change Neoplasm is the disturbances of growth characterized primarily by increasing of abnormal and excessive proliferation of cells ,or an abnormal mass of new tissue which persists and grows independently of its surrounding structures and which has no physiological use (1,2) ,or its lesion resulting from the autonomous or relatively autonomous abnormal growth of cells which persists after the initiating stimulus has been removed (3).

Tumors are divided into two main groups: benign and malignant, Benign is any tumor not likely to recur after removal ,grows slowly ,remain localized and usually does little harm to patient. While malignant is likely to progress and eventually destroy life , with ability to invade and metastasize (4).

They are also classified histologically according to the specific cell of origin of an individual tumor.This classification includes numerous subdivision but the major categories of origin are: from epithelial cells ,from connective cells and from lymphoid and haemopoietic organs (5).

Cancer is a woard used more in the public arena than in medicine .It has emotive connotations and generally refers to a malignant tumor or neoplasm. The considerable morbidity and mortality associated with malignant tumor may be due to : pressure on and destruction of adjacent tissue ,for motion of secondary tumors ,blood loss from ulcerated surfaces, obstruction of flow , production of hormone, weight loss and debility ,anxiety and pain(3,6).

The incidence of cancer varies with age ,race ,geographic factor and genetic backgrounds. Cancer are most common at the two extremes of age .The geographic variation results mostly from different environmental exposures . Most cancer are sporadic but some are familial (5,7).

Due to the increased incidence and mortality from tumors in south Iraq in the last years ,this study was made to know the number of people died by different of Missan govrnorate types of tumors ,the age of people died and the type of tumor during the period 2000 - 2009 years .

Material and Methods

The data of this study were taken from the reports recorded in the main health of Missan governorate during the period from 2000 to 2009 and from the minstery of Iraq - health cancer board.

ISSN-1994-697X

The cases of tumor diseases were identificated of Al-Sadder general hospital and Al-zahrawi surgical hospital in the governorate by general medical examination to the patient before dieing which included :clinical examination, urine examination, blood examination ,histopathological examination ,sonar examination,CT scan.

Also the information about disease included the type of tumor ,sex, age and **area of occurrence .**

Results

Table(1)show the distribution of tumors according to the sex ,the number of male deaths was higher than females ,the total number of males was 1256 and percentage of them was 54.92% while in females was 1031 and a percentage of 45.08% respectively .

The distribution of tumors according to the age was shown in table (2).The age group between 51-60 year recorded higher number of dead the was 503 and a percentage of 21.99% followed by age group between 61-70 year when the number was 452 and a percentage of 19.76%. while the low number of tumor cases which recorded in the last age group (more than 91 year old)with 22cases and a percentage of 0.96%.

Table(3) show the distribution of tumors according to the organs or systems infected ,The tumor of digestive system recorded high number of cases compared with other systems with 337 and a percentage of 14.74%,while the respiratory system tumors recorded 314 and a percentage of 13.73% .the tumors of Not other- wise Specific (NOS) recorded 25 and a percentage of 1.09%..

The distribution of tumors according to the region is shown in table (4). The high number of dead which recorded in Amara was 1490 and a percentage of 65.15% followed by Al- Majar Al- Kabeer with a number of 246 and a percentage of 10.76% while the low number of dead was recorded in ALi Sharki with number of 20 and a percentage of 0.87%.

The distribution of tumors according to the years is shown in table (5).The high number was recorded in 2006 with a number of 419 and a percentage of 18.32% while the low number was recorded in 2009 with 111 dead and a percentage of 4.85% .

Table (1): distribution of tumors according to the sex

sex	number	Percent(%)
male	1256	54.92
female	1031	45.08
Total	2287	100

ISSN-1994-697X

Table(2): distribution of tumors according to the age groups

Age group(year)	number	Percent(%)
1-10	151	6.60
11-20	112	4.90
21-30	137	5.99
31-40	256	11.20
41-50	407	17.80
51-60	503	21.99
61-70	452	19.76
71-80	192	8.40
81-90	55	2.40
Over 91	22	0.96
Total	2287	100

Table (3): distribution of tumors according to the organ or system infected

Organ or system	Number	Percent(%)
Blood	206	9.00
Skeletal system	41	1.79
Breast	291	12.72
Digestive system	337	14.74
Nervous system and eye	128	5.60
Male genital organ	62	2.71
Female genital organ	90	3.94
Respiratory system	314	13.73
Urinary tract	255	11.15
Skin	64	2.80
Soft tissue	39	1.70
Lymph nodes	153	6.69
Thyroid and other endocrine gland	66	2.89

ISSN-1994-697X

Neoplasm a of Lips oral cavity, pharynx. larynx	105	4.59
NOS	25	1.09
Unknown	111	4.85
Total	2159	100

Table(4): distribution of tumors according to the area

Area	number	Percent(%)
Amara	1490	65.15
Al-Majar Al-Kabeer	246	10.76
Al Maymoona	93	4.07
Al Salam	51	2.23
Al Msharah	44	1.92
Al Kahlaa	78	3.41
Kumat	52	2.27
Ali Al Sharki	20	0.87
Ali Al Gharbi	53	2.32
Qalat Salih	133	5.82
Al Azir	27	1.18
Total	2287	100

Table (5): distribution of tumors according to the year

year	number	%
2000	117	5.12
2001	213	9.31
2002	253	11.07
2003	116	5.07
2004	236	10.23
2005	243	10.63
2006	419	18.32

ISSN-1994-697X

2007	280	12.24
2008	299	13.07
2009	111	4.85
total	2287	100

Discussion

Table(1)show that them increase was in the number of males than females ,this result was in agreement with results of other scientists , (8) who estimated that the percentage of cancer deaths in men about 52% in the United state of America .(9)recorded that the rate of bladder cancer in male was 73% more than the rate of bladder cancer in females 23%.(10)shows that the incidences of Hepatocellular and colonic carcinoma in male patients were higher when compared with female patients.

The reasons for this sex difference however ,remain unclear .Risk factors include genetic and environmental factors such as obesity ,insufficient physical activity, cigaaretie and alcohol consumption ,red meat consumption ,hormone replacement therapy and non- steroidal anti-inflammatory drug use have a protective effect .Differences in exposure and response to risk factors between males and females may explain the vary ance between sexes (11,12,13) .

Table(2)shows there was an increase in number with age ,the age group between 51-69 year old recorded high number than other age groups for both sexes.This result was in agreement with results of other scientists . (14)recorded that age group of more than 80 years old had high number of mortality due to cancer while (9)recorded that age group between 50-59 years and 60-69 year were high in bladder cancer compare with other age groups . For example ,the risk of getting breast cancer increase with age, that is 3 or 4 out of every 100 women who are 60 years old today will get breast cancer by the age of 70 (15).

The results for cancer also support the idea that there has been exposure to some mutagenic agent at some time in the past ,It is commonly believed that the lag between initiation and expression of cancer is a significant period : for example to acute external low of radiation the onset of leukemia is stated to be about 5 to 7 years ,and for breast cancer and solid tumors as high as 15 to 20 years ,However ,genetic damage expansion models for cancer, show that it is the acquisition of a key number of mutations which leads to final clinical expression .This is then seen as purely probabilistic so long as the mutagenic stresses are constant; in this way the exponential increase in cancer rates with age are explained as are cancer rates and initiation expression lags in cell populations with different natural replication rates (16,17,18).

cancer rates increase in number with increase age years according to registered cases in Iraq 2008 which registered high cancer age-specific incidence rates in age group(over70 year) while lower rate in age group(0-5) year (19)ble(3) shows the number of patients according to the type of organ or system .The high number was

recorded in the digestive system ,respiratory system, breast ,urinary tract and blood. The digestive system cancer include colorectal cancer, stomach cancer and liver cancer .The colorectal cancer is the third most common cancer in the world with 1.24 million new cases diagnosed in 2008, the stomach cancer is the fourth most common cancers in the world with 989.000 new cases diagnosed in 2008 .Liver cancer is the sixth most common cancer in the world with 750.000 new cases diagnose in 2008(20)In Europe the deaths from colorectal cancer ranked second about 189.000 ,followed by death from stomach cancer 152.000(21). In the Arab world the colorectal cancer is the first most common cancer in Kuwait ,Liver cancer is the second most common cancer in Algeria (22). The respiratory system cancer include lung cancer and other parts of the respiratory system. Lung cancer is the most common cancer worldwide contributing nearly 13% of the total number of new cases diagnosed in 2008 about 1.61 million new cases. In Arab world the lung cancer is the first most common cancer between males in many countries include Tunisia ,ALgeria and Jordan (22).

In Europe the most common case of death was lung cancer 330.000 about one-fifth of the total number of cancer deaths in 1995 (21).In Arab world it's expected to be 14.788 new cases for ages below 65 year and 14.788 cases for ages above 65 year in 2020 (23).

Breast cancer is the most common cancer in women worldwide ,with 1.38 million new cases diagnosed in 2008 . in Arab world the breast cancer is the first most common cancer between female in many countries such as Egypt ,Tunisia ,Algeria ,Jordan ,KSA ,Kuwait and Lebanon(22,24).

Urinary bladder cancer is the ninth most frequent it accounts for 3.3% of the newly diagnosed cancer case and 2.1% of cancer deaths .cancer of kidney is not very common ,it constitutes 1.9% of all cancer(20) . Urinary bladder cancer is the first most common cancer between males in Egypt and second in Tunisia ,Algeria and Jordan (22).

In Iraq the breast cancer is the first most common cancer between in female(2637case ,34.74%) followed by the leukemia (405case , 5.34%0) while the bronchus and lung cancer is the first cancer between males (975 case ,14.80%) followed by urinary bladder (667 case,10.12%) (19) .

Table (4)shows the number of deaths according to the area ,the high number recorded in AL-Amara (governorate center) than the other cities in Missan governorate.

In Iraq the number of cases and percentage of total cancers in 2008 , registered Baghdad higher number(3792 case,26,74%)followed by Al-Basrah (1340 case ,9.45%)nd Al-Najaf (1031 case,7.27%)while lower number was in Al-Muthana(244 case,1.72%)followed by Duhok (261 case ,1.84%)(19).

This result is in agreement with results of (9)which recorded the high number of bladder cancer in AL-Nassiriya city when is more than in the other towns in Thi-Qar governorate,

ISSN-1994-697X

The incidence and mortality of cancer disease differ from area to area and from country to country for example the liver cancer incidence rates in Egypt was five to seven times as high as that of the other MECC populations and more 3 times than that in U.S.SEER population (25).

In Asia the highest rate of liver cancer recorded in Mongolia ,while the highest rate of stomach cancer was recorded in Republic of Korea followed by Mongolia and Japan(20).

The difference between area in Missan governorate may be due to changes of social and dietary habits, increased smoking ,low socioeconomic state.

Table(5) shows the number of deaths according to the year ,The high number was recorded in 2006(419)case followed by year 2008 (299)case while the low number was recorded in 2009 (111)case , the annual number of new cancer cases during period(2000-2008)year registered the high number in 2006(15172)case in all Iraq while low number in 2000(10888)case and 2003(11248)case (19).study of (22) showed an increase in mortality in Egypt during (1981-1996) year .

References

1-Shamma,A.H.(1971).Lectures in pathology.Overseas trading co. Beriut . Lebanon . 435p.

2-Walter,J.B.and Isreal M.S.(1987),General pathology,six th edition,Churchill Living stone,Edinburrgh,UK,739P.

3-Underwood,J.C.E.(2004).General and systematic pathololgy .Churchill Living stone .London.839 p.

4-Pocock ,G. and Richards,C.D.(1999). Human physiology ,The Basic of medicine ,Oxford University press,New York:625P.

5-Kumar,V.;Abbas,A.;Fausto,N.andMitchell,R.N.(2007).Robbins basic pathology .8th ed.,Saunders,Philadelphia.946 p.

6-NIA,National Institute on Aging (2010). Cancer Fact for people over 50, National Institute of health ,U.S. Department of Health and Human services.

7-Murthy,V.H.;Krumholz,H.M. and Gross,C.P.(2004).Participation in Cancer Clinical Trials Race ,Sex and age .Based disparities .Am. Med. Assoc. J. , 291 (22) :2720-2726.

8-Greenlee,R.T.;Murray,T.Bolden,S.and Wingo,P.A.(2000).Cancer statistics ,2000 .CA Cancer J.Clin.50(1):7-33.

9-AL-Fartosi,K.G.;AL-Musawy,B.R.and AL-Qazi,S.H.(2008).Study of bladder cancer in Thi-Qar governorate/Iraq year 2006 .J.Thi-Qar Sci.,1(2):9-14.

10-Mezher,I.A.and Hassan B.M.(2009).Comparison between hepatocellular carcinoma and colorectal cancer by using some tumor marker .AL-Taqani,22(4):82-90.

ISSN-1994-697X

11-Wu,X.C.;Chen,V.W.;Steele,B.;Ruiz,B.;Fulton,J. and Liu,l.(2001) . Subsitespecific incidence rate and stage of disease in colorectal cancer by race,gender and age group in the United States,1992-1997.Cancer,92(10):2547-2554.
12-Iacopetta,B.(2002).Are there two sides to colorectal cancer? Int.j.Cancer ,101:403-408.
13-Giovannucci,E.and Wu ,K.(2006).Cancers of the colon and rectum In:Schotten feld,D.,Fraumeni J F,Jr.,editors.cancer epidemiology and prevention .3rd ed.,New York,Oxford university press,809-829 p.
14-Levi,F.;Randimbison,L. and Lavecchia C.(1992). Breast cancer survival in relation to sex and age.Oncology,49(6):413-417.
15-CDC-Centers for disease control and prevention.(2007).Breast cancer risk by age Atlanta,USA.
16-Armitage,P.and Doll,R.(1954).The age distribution of cancer and a multi-stage theory of cancinogenesis .British J.Cancer ,8(1):12.
17-Moolgavkar,SH.(1978). The multistage theory of cancinogenesis and the age distribution of cancer in man .J.Nat.Cancer Inst.61(49):52.
18-Busby ,C.;Hamdan ,M.;Ariabi,E.(2010).Cancer ,Infant mortality and birth sex-ratio in Fallujah,Iraq 2005-2009.Int.J.Environ .Res.Public Health.,7(7):828-2837.
19-Iraq Cancer Board. (2008). Iraqi cancer registery 2008,Ministry of Health ,Baghdad . Iraqi_cancerboard@yahoo.com
20-Data for cancer frequency by country source :Globocan 2008 data base (version 1.2) http://globocan.iarc.fr.
21-Bray,F.;Sankila,R.;Ferlay,J.and Parkin,D.M.(2002).Estimates of cancer incidence and mortality in Europe in 1995,Eur.J.Cancer ,38(1):99-166.
22-Elattar,I.(2005).Cancer in the Arab world :Magnitude of the problem .ULCC,March 21-25.
23-Salim,E.L.;Jazieh,A.R.and Moor M A.(2011).Lung cancer incidence in the arab league countries :risk factors and control.Asian Pac.J.Cancer Prev..12(1):17-34.
24-Arkoob,K.;AL-Nsour,M.;AL-Nemry,O. and AL-Hajawi,B.(2010). Epidermiology of breast cancer in women in jordan : patient characteristics and survival analysis .East.Med.Health .J.,16(10):1-8.
25-Freedman ,L.S.;Edwards ,B.K.;Ries,A.G. and Young,J.L.(2006).Cancer incidence in four member countries of the Middle East cancer consortium (MECC)compared with US SEER. National cancer Institute .NIH. PUB.No.06-5873

ISSN-1994-697X

ISSN-1994-697X