

CANCER IN THI-QAR GOVERNORATE : PATTERN AND DISTRIBUTION OF CANCER CASES DURING 2005-2009

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ABSTRACT

Background: Little is known about the pattern and burden of cancer in Thi-qar city. The aim of this paper is to report the pattern and distribution of cancer in largest series of Thi-qar cancer patients according to the year of diagnosis ,age , gender ,topography ,morphology and geographical distribution.

Patients and methods : During a five year period (2005-2009). 3523 cancer patients, with various types of newly diagnosed cancer were registered by Cancer Control Unite in Thi-qar from all Health Institutions in Thi-qar and in other neighboring Governorates . 1702 patients were males (48.3%) and 1821 were females (51.7%). Adding that around of 1458 patient(41.4%) of a total were died within this period. The crude relative frequencies(rates) of extent of cancer risk(incidence &mortality) have been determinant with reference to age, sex, area and year of diagnosis.

Results: The number of cancer cases and the incidence rates are increased among these five years, where is the number is 436 and IR 28.7per 100000 of population in 2005 while it is 804 and IR 46.9 in 2009 .This gives an average annual incidence or a crude annual incidence rate(IR) of 43.6 cases per100000of Thi-qar population per a year and the incidence is more in females than in males(48.3%for males and 51.7%for females). Higher number of cases were drawn from population of the center of the governorate 1455(41.3%), while lesser number in Al-Jabiash District 265(7.5%) and other district lie in between. Breast cancer is the most common or frequent cancer accounted for(16.5%) of all cases and it alone accounted for 31.2% of all cancer in females with the incidence rate of 7.2/100000 of population , lung &bronchus is the second (11.2%), bladder was the third of all cancer cases(10.6%), while other cancers as cancers of prostate and skin were less frequent incidence. The four most commonly diagnosed types of cancer in males are :lung &bronchus ,u. bladder, lymphomas and leukemias , accounting for 53.9% of estimated cancer cases in males. The four most commonly cancer in females are: Breast ,leukemia ,u. bladder, and lymphomas accounting for 53.5% of estimated cancer cases in females. Cancer risk infected all age groups in different percentages and the age specific incidence rate (ASIR) increased with advancing ages in both sexes, higher rates are noticed in male children compared to female children up to age 14 . In addition, the risk of cancer is higher for females(sex-specific incidence rate is45.3per 100000 population) than for males (sex-specific incidence rate is41.9 per 100000 population). The number and percentage of death cases are also increased during these five years, it is more in males than in females ,and the average annual number of death is 292 or the crude annual death rate is 18/100000 of population.

Conclusion: Cancer is existed growing health problem in Thi-qar cancer patients, it's with specific pattern and with different etiological factors.

SUMMARY

This study was described the cancer a growing, increasing health problem in Thi-qar during a period of five year (2005-2009) in a largest series of Thi-qar cancer patients .A bout 3523 case of newly diagnosed cancer case were registered ,about 1458(41.4%) were died in these five years. Both the bulk and the risk of developing cancer and the death rates are increased with advancing ages in both sexes in all Thi-qar Districts in subsequent these five years. The four most common cancers are breast, lung& bronchus ,urinary bladder and leukemias. The breast cancer is first killer in females while that lung is first killer in males.

INTRODUCTION

Cancer is a growing public health problem at global level in terms of number of new cases, cost of care and the toll of death[1].In the part of the world where Iraq is located, cancer seems a growing health problem in terms of incidence and mortality, it has become increasingly important as concern with development and progress that has been achieved in Iraq. [2].In 2007 cancer was the third leading cause of death in Iraq and the 7th leading cause of morbidity [3].Little is known about the pattern and burden of cancer in Thi-qar city and did not receive sufficient attention in scientific researches or no comprehensive study handled this problem [4,5]. The need for comprehensive knowledge about cancer in Thi-qar is mandatory to plane and establish control programs for the common cancer which may be amenable to prevention ,early detection and cure . The aim of this paper is to report the pattern and distribution of cancer in largest series of Thi-qar cancer patients according to the year of diagnosis

,age , gender ,topography ,morphology and geographical distribution.

PATIENTS & METHODS

During a five year period (2005-2009). 3523 cancer patients ,with various types of newly diagnosed cancer were registered by Cancer Control Unite in Thi-qar from all Health Institutions in Thi-qar and in other neighboring Governorates . 1702 patients were males (48.3%) and 1821 were females (51.7%). Adding that around of 1458 patient(41.4%) of a total were died within this period. The crude relative frequencies(rates) of extent of cancer risk(incidence &mortality) have been determinant with reference to age ,sex ,area and year of diagnosis.

RESULTS

The number of cancer cases and the incidence rates are increased among these five years, where is the number is 436 and IR 28.7per 100000 of population in 2005 while it is 804 and IR 46.9 in 2009 .This gives an average annual incidence or a crude annual incidence rate(IR) of 43.6 cases per100000of Thi-qar population per a year and the incidence is more in females than in males(48.3%for males and 51.7%for females), [Table-1-] . Higher number of cases were drawn from population of the center of the governorate 1455(41.3%), while lesser number in Al-Jabiash District 265(7.5%) and other district lie in between,[Table-2-] . Breast cancer is the most common or frequent cancer accounted for(16.5%) of all cases and it alone accounted for 31.2% of all cancer in females with the incidence rate of 7.2/100000 of population , lung &bronchus is the second (11.2%), bladder was the third of all cancer cases(10.6%), while other cancers as cancers of prostate and skin were less frequent incidence [Table-3-] .The four most commonly diagnosed

types of cancer in males are :lung & bronchus ,u. bladder, lymphomas and leukemias , accounting for 53.9% of estimated cancer cases in males. The four most commonly cancer in females are: Breast ,leukemia ,u. bladder, and lymphomas accounting for 53.5% of estimated cancer cases in females[Table-3-]. Cancer risk infected all age groups in different percentages and the age specific incidence rate (ASIR) increased with advancing ages in both sexes, higher rates are noticed in male children compared to female children up to age 14 . In addition, the risk of cancer is higher for females (sex-specific incidence rate is 45.3 per 100000 population) than for males (sex-specific incidence rate is 41.9 per 100000 population), [Table-4-]. The number and percentage of death cases are also increased during these five years, it is more in males than in females ,and the average annual number of death is 292 or the crude annual death rate is 18/100000 of population [Table-5]. Breast cancer is the first killer in females ,while that lung & bronchus is the first killer in males . The carcinoma variety was the commonest morphological type that appeared in this study and with presence of undifferentiated behavior in a number of cancer varieties .

DISCUSSION

The problem of cancer is a common problem worldwide .Many studies showed high prevalence of malignant diseases in most western countries , it's also an existing problem in the third world countries and both developed or developing nations are experiencing growing trends in cancer incidence [4,5]. The worldwide prevalence of this problem is probably due to causes of many cancers are not known, limitation of specific preventive measures or various modalities of cancer therapy and many types of cancer

are very aggressive ,diagnosed very late and by the time they are diagnosed , metastasis has already taken place[5]. This study revealed that cancer incidence is increasing in Thi-qar during these five year period (2005-2009),and as compared with previous report at 2004,in which the annual incidence rate in Thi-qar was estimated at 38.92 per 100000 population [6].Such increase may related to function of risk of cancer after the year 1991(Gulf War)[7],attractiveness of health care institutions in Thi-qar and completeness of registration[8,9,10,11].The cancer risk showed relatively high incidence for females than for males and this probably due to high incidence of breast cancer and other female sex-specific cancer (uterus& cervix and ovary), and this finding again agreed with other published reports and studies[12]. Distribution of cancer cases is differed among Thi-qar Districts. Variation may be explained by variation in population capacity and completeness of registration .Higher annual IR in areas(districts) with low population capacity like in AL-Jabiash and in Sook-Alshiookh districts, this indicate that cancer risk is high in these regions which is probably related to many causative factors[7] . The overall pattern of cancer in Thi-qar is similar to the pattern seen in Iraq as a whole with some variation in the order of cancers. Bone cancer replaced by laryngeal cancer and laryngeal cancer replaced by skin cancer[6],but it differed from that in most of Gulf Cooperation Council(GCC) countries [13], in which the cancers of Prostate and liver was a major cancers. Also it differed from that in Iran ,in which there is high incidence of Gastrointestinal tract cancers [14]. Also in Jordan [15] ,in USA the cancer of prostate accounting for 29% [16] , in most of European countries [17] ,and in some African countries as Nigeria in which the

prostate cancer is 16.5% [18] .This variation may be related to variation in population age structure , diagnostic facilities and completeness of registration process. Increases in the risk of developing cancer with advancing age groups it reflect some sort of similarities with pattern in Iraq as a whole and other Iraqi provinces like in Basrah ,and such pattern could reflect a similar or shared long acting risk factors or accumulative risk of exposure of population that lived in Iraq or specifically in southern of Iraq [5,6] .Also this cause again could be related with other causes(risk factors) that lead to increased cases of death due to cancers during these five years among most age groups of population in Thi-qar , and this indicate that cancer is not only a significant cause of morbidity as indicated by incident cases but also an important cause of death (the third cause of death in Thi-qar city), and generally the crude death rate in Thi-

qar is seems low in comparison to other provinces like in Basrah and other countries[5,19] .In order to reach to precise information about the risk of death from cancer in Thi-qar , it should need to a long reference period of time and to other epidemiological statistics.

CONCLUSION

Cancer is existed growing health problem in Thi-qar cancer

patients, it's with specific pattern and with different etiological factors. This pattern provided an important information about all cancer forms that can be useful in planning and in establishing control programs for the common cancer, and I hope that this study could be the primary resource not only for epidemiological research on cancer determinants but also for planning and evaluating health services for prevention, diagnosis and treatment of these diseases in Thi-qar city.

Tables

Table (1) cancer cases by years of diagnosis and sex

Years	Total No. of cases	Male		Female		Registered cases/100000 pop.
		No	%	No	%	
2005	436	230	52.8	206	47.2	28.7
2006	544	254	46.7	290	53.3	34.7
2007	568	277	48.8	291	51.2	35.1
2008	637	289	45.4	348	54.6	38.3
2009	804	376	46.8	428	53.2	46.9
Total	3523	1702*	48.3	1821**	51.7	43.6

*276 cases could not be classified but included in the calculation of total & CIR rates.

**258 cases could not be classified but included in the calculation of total & CIR rates.

Table (2) Cancer cases among all Thi-qar Districts

Province	Al Nassiryiah	Al-Shattra	Sook-Alshiookh	Al-Riffaey	Al-Jabiash	Others	Total
Total No. of cases	1455	613	517	383	265	290	3523
% out of Total	41.3	17.4	14.7	10.9	7.5	8.2	100.0
Registered /100000 Per a year	49	33.5	40.4	22.8	82.5	-----	43.6

Table (3) Type of cancer by primary tumor site and sex

Site of tumor	Total No. of Cases in 5 years	IR/100000 Pop. /year	Male		Female	
			No.	%	No.	%
1-Breast	583	7.2	14	0.8	569	31.2
2-Lung	393	4.9	303	17.8	90	4.9
3-Urinary bladder	375	4.6	239	14.0	136	7.5
4.Leukemias	336	4.2	184	10.8	152	8.3
5-Lymphomas	312	3.9	193	11.3	119	6.5
6.Colon –rectum	154	1.9	77	4.5	77	4.2
7-.C.N.S	141	1.7	75	4.4	66	3.6
8-Bones	118	1.5	67	3.9	51	2.8
9-Stomach	117	1.4	78	4.6	39	2.1
10-Larynx	87	1.1	63	3.7	24	1.3
11-Kidney	75	0.9	51	3.0	24	1.3
12-Thyroid gland	69	0.9	31	1.8	38	2.1
13-Uterus&cervix	64	0.8	----	----	64	3.5
14-Soft tissues	55	0.6	38	2.2	17	0.9
15-Ovary	54	0.6	----	----	54	2.9
16-Pancreas	53	0.6	28	1.6	25	1.4
17-Prostate	41	0.5	41	2.4	----	----
18-Skin	38	0.4	27	1.6	11	0.6
Sub total	3065	37.9	1509	88.7	1556	85.4
All other sites	458	5.7	193	11.3	265	14.6
Grand total	3523	43.6	1702	100.0	1821	100.0

Table (5) Cancer death cases by a year of death and sex

Year	Total No. of cancer death	Males	females	% out of total	Annual death rate/100000 Per year
2005	250	105	145	17.1	14.6
2006	263	152	111	18.0	15.8
2007	288	186	102	19.8	17.8
2008	296	147	149	20.3	17.8
2009	361	207	154	24.8	23.8
Total	1458	797	661	100.0	18.0

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السرطان في ذي قار : نمط وتوزيع حالات السرطان اثناء

الاعوام ٢٠٠٥-٢٠٠٩

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في هذا البحث تمت دراسة نمط وتوزيع السرطان خلال فترة خمسة سنوات (٢٠٠٥-٢٠٠٩) في سلسله كبرى من مرضى السرطان في ذي قار. حيث تم تسجيل (٣٥٢٣) إصابة سرطانية جديدة في مركز السيطرة على الامراض السرطانية في ذي قار ، توفي منهم حوالي ١٤٥٨ (٤١،٤%) خلال هذه الفترة. كما وصفت السرطان في ذي قار بأنه مشكلة صحية مهمة متنامية ومتعددة الاسباب والتبعات والابعاد، وذات نمط معين، حيث ثبت وجود سرطانات نادرة واخرى حدثت في اعمار مبكرة وكانت النسب السنوية للإصابات وكذلك الوفيات تتزايد سنويا في اغلب مناطق واقضية المحافظة ولجميع الفئات العمرية في كلا الجنسين . كانت السرطانات الاربعة الاكثر شيوعا هي سرطان الثدي، الرئة والقصبات ، المثانة البولية ، وسرطانات الدم ، في حين كانت سرطانات البروستاتة والجلد هي الاقل شيوعا ، وكان سرطان الثدي هو القاتل الاول عند الاناث بينما سرطان الرئة والقصبات يعتبر القاتل الاول لدى الذكور.