

Incidence of cancer in Hit District

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Abstract

Background: The rate of malignancies, its types and aggressiveness of the disease have been increased in Anbar governorate as a part of disease increase all over Iraq there were no sufficient studies in areas remote from Baghdad capital of Iraq to prove the behavior and rate of malignancies there.

Aim : to study the incidence of cancer in Hit district over one year study regarding types of disease, its frequency, percent of the disease in comparism with international rate .

Patients And Methods: A descriptive study of patients proved they had different types of malignancies over one year from 2\1\2008 – 2\1\2009 in Hit town as part of Anbar Governorate west of Iraq. Data of the adult patients collected from Hit General Hospital and private clinics regarding sex, age, type of malignancies , treatment they received and what were their health last results.

Results: from this study there were (93) cases of different types of malignancy over one year study, patients ratio was 1:1397 i.e. 71.5\100 000

Most cases were found in HIT city center (55) cases (1:1091 i.e.91.6\100 000) the highest cancer types were found in G.I.T. System 31 cases (33.33%) followed by haematology 15 (16.12%) & breast ,13(13.97%) for both, the lowest ratio was found in locomotor, skin& CNS 2(2.10%) cases for each. Majority of patients survived (75) cases (80.6%) , (18) cases (19.3%) were died and only (1) patient (1.1%) had been cured completely but he had got psychological trauma with recurrent abnormal behavioral conditions necessitate psychiatrist management, while other survivals has residual disabilities, mild higher rate of malignancy was found among male (50) patients(53.77%) & 43 (46.2%) in female.

Conclusion: the incidence of malignancy in HIT district was (71.5\100 000) compared with national statistical study was (10- 40 | 100 000) so there was a big increase in the incidence of malignancy in HIT district, that need further studies of the area looking for if possible for the cause.

Keywords: Cancer, Oncogenesis, Malignancy

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Introduction :

The rate of malignant disease had been increased significantly in Iraq may be due to many causes like wars and usage of depleted uranium ⁽¹⁻⁶⁾, increase the size of population

that reflected by increase of diseases, the state of economical blockade on Iraq at the period 1990 – 2003 and its consequences of mal-usage of repeated synthetic materials used by human especially the that used for eating and

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drinking and may be many other causes. That necessitate many study to prove that the percent of malignancy increased in Iraq and to prove if possible the cause. AL-Anbar Governorate is one of the governorate of Iraq at which the rate of malignancy increased in it because many battles occur in it, in other way it is one of the biggest governorate in Iraq. One of the biggest town of the AL-Anbar governorate is Hit town the size of population are 150 000 and it is about 180 kilometer to the West of Baghdad the capital city of Iraq, there was no study at that area so it taken as first sample to be studied in the governorate and encouraging for further studies in other town in AL-Anbar governorate and hence all towns in Iraq. Malignancy is considered as one of serious disorders in the globe. The incidence rate of cancer found by different referees of Oncology, in Britain was 10/100000 – 40/100000 in 2003, according to WHO (6/100000) all over the world 2008⁽⁶⁾.

It cause one of the main leading cause to death all over the year and cause high commercial burden, on the ministries of the health all over the world, billions of dollars cost annually.

There are many causes of cancer environmental factor like contamination of the ground with depleted uranium as example in case of wars like what

happened in Iraq, genetic factors of patients and exposure of patients to contaminated diets, water and other liquids with many chemical, microbiological and physical factors affecting the patients⁽⁴⁻⁹⁾.

Patients and methods :

A descriptive study was done on patients suffering from different types of cancer patients attending private clinics and Hit General Hospital during the period extended from 2\1/2008 – 2/1/2009.

Patients were managed by well expert seniors proved they had different malignant conditions good history full clinical examination were done fully investigated by hematological, biochemical laboratory tests some need surgery with histopathological studies received chemotherapy ,radiotherapy and followed up over one year according to disease type and its management guideline. All data were collected analyzed through descriptive study by numbers and percents. Verbal consents were taken from each patient in this study.

Results :

Table 1- Fate of oncogenic patients.

No. of malignant cases	No. and percent of death	No. and percent of survival	No. and percent of cured	No. and percent of residual disability
93	18 19.3%	75 80.6%	1 1.1%	72 77.4%

Table 2- Sex distribution of cancer.

No. of malignancy	Male	female
93	50 53.7%	43 46.2%

**Table-3: Rate of cancer in Hit city and surrounding municipalities.
HIT population size according to Hit city local council**

City or town	Population NO.	NO. of Cancer Cases	Ratio of NO./Population
Hit city center	60000	55	91.6\100000 1: 1091
Muhamedi	7000	1	14\100000 1: 7000
Koubaisa	12000	9	75\100000 1: 1333
Dulab	8000	7	87\100000 1:1142.85
Baghdadi	21000	3	14\100000 1:7000
Alfurat	22000	8	36.3\100000 1:2750
Total	130000	93	75\100000 1:1397

Table -4 distribution of cancer in Hit and its municipalities

NO.	City or town	GIT	Hematology	Breast	Urinary system	Respiratory system	Endocrine system	CNS	Locomotor system
1	Hit city center	21	9	10	8	8	6	2	1
2	Kubaisa	4	4	2	1	-	-	-	-
3	Alfurat	4	2	2	-	-	-	-	-
4	Muhamedi	-	-	-	1	-	-	-	-
5	Duolab	4	-	-	1	1	-	-	-
6	Baghdadi	-	1	-	1	-	-	-	-
7	Total 93	35	16	14	12	9	6	2	1

Table 5- systemic distribution of cases

	System	No. of patients	
1	GIT	31	33.3%
2	Hematology	15	16.12%
3	Breast	13	13.9%
4	Urinary system	12	12.9%
5	Respiratory system	11	11.8%
6	Endocrine system	6	6.5%
7	Locomotor and skin	2	2.10%
8	CNS	2	2.10%
	Total	93	100%

Discussion:

According to results of this paper the rate of malignancy in Hit town is high 91.6\100000 higher than that reported in other developed countries like U.K. (10 – 40/100000) ⁽⁵⁾ and USA (40/10000) ⁽⁶⁾. This is might be due to changes in the environment of the area which increase the rate of malignancy in the area as long as the area exposed to many battles where depleted uranium were used made it contaminated with this carcinogenic material so the rate of malignancy increased, the period of Iraq economic blockade in the nineteenth of past century made healthy background, socioeconomic status to be regressed that reflected to the increase of the diseases include malignant conditions also in the blockade era many changes in behavior of the community occur like the use of re-synthesized plastic dishes for diet, reuse of cooked oil for dieting where these are carcinogenic materials.

High ratio of malignancy was found in Hit city center in contrast to municipalities. this might be attributed to high population number in this city as well as the chance of exposure of population to oncogenic factors in the surrounding area like chemical , biological and physical factors is more ^(2,3).

The higher rate of cancer was found in GIT where in WHO statistics the higher rate of malignancy where in the breast system, that might be due to the increased exposure for carcinogenic factors due to contamination of the ground and then agricultural diet from area and consumed unsuitable grain flower and unhealthy food during the period 1990 – 2003 due to economical blockade on Iraq.

Hematological malignancy was the next because it is a sensitive system may be due to above causes^(3,5)

The cancer of breast also was found high among female in population because low education and cultural state of community , females ignore the least diagnostic test (the mirror test) due to regression of the health status and health education of the community after economic blockade.

Regarding sex distribution ratio of cancer among patients , no much difference where found due to similar chance of exposure to both sex⁽¹¹⁾ .

The higher rate survival disability and low cure rate , this was due to late diagnosis with poor therapeutic facilities in the area due to regression of the health status of the country because of economical blockade of Iraq .

From this study malignancy rate undergoes increase in Hit district so we recommend :

- 1- Further study in the area over longer period and larger data for.
- 2- Same study in other towns in the governorates and then all towns of Iraq.
- 3- From points 1 and 2 we can do malignancy map of the country so we can control if possible the disease.
- 4- Further studies to understand the oncogenic sources of the environment in cooperation with other sciences so if possible we can manage it.

Limitations

As in any retrospective studies , some of important data might have been missed from these archives, some time we have difficulties in investigations due to unavailability in general hospital due to reduce infrastructure in the country after many wars .

Conclusion

Our result provide an insight toward understanding of malignant diseases presentation, course of the disease, if possible cause and prognosis .There were strong relationship malignant rate and environmental factor so we recommend further study in this field.

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References:

- 1- Kamangar F., Dores M.,G., Anderson F.W.: Patterns of cancer incidence, mortality, and prevalence across five continents: Defining priorities to reduce cancer disparities in different geographic regions of the World. J. of Clinical Oncology 2006;Vol. 24 No. 14: 2137-2150.
- 2- Jemal A1, Siegel R, Ward E, Hao Y, Xu J, Thun MJ:CA Cancer statistics. Cancer J Clin. 2009. Jul-Aug;59(4):225-49.

- 3- Jemal A, Siegel R, Ward E, Hao Y, Xu J, Murray T, Thun MJ.:CA Cancer statistics. J Clin. 2008 Mar-Apr; 58(2):71-96. Epub 2008 Feb 20.
- 4- Worldwide cancer data: World Cancer Research Fund.2008.
<https://www.wcrf.org/dietandcancer/cancer-trends/worldwide-cancer-data>
- 5- Jemal A, Siegel R, Ward E, Murray T, Xu J, Thun MJ.:CA Cancer statistics . J Clin. 2007 Jan-Feb; 57(1):43-66.
- 6- Anand P, Kunnumakkara AB, Kunnumakara AB, et al.: Cancer is a preventable disease that requires major lifestyle changes. Pharm. Res. September 2008; 25 (9): 2097–116.
- 7- Loeb LA., Harris CC.: Advances in chemical carcinogenesis: a historical review and prospective. Cancer Res. Sep.2008; 168(17): 6863-72.
- 8- Sophia S. Wang, Susan L. Slager, Paul Brennan, Elizabeth A. Holly, Silvia De Sanjose,et al.: Family history of hematopoietic malignancies and risk of non-Hodgkin lymphoma (NHL): a pooled analysis of 10 211 cases and 11 905 controls from the International Lymphoma Epidemiology Consortium (InterLymph). Blood. Apr. 2007; 109(8): 3479–3488.
- 9- Goldman L. , Ausiello d. : oncology , in Cecil textbook of medicine :2004; 22th. edition, page 1116 . Pub. Kim Murphy. USA.
- 10- Annual Report Iraqi Cancer Registry 2008. Iraqi Ministry Of Health 2008.
<https://moh.gov.iq/upload/upfile/ar/233.pdf>
- 11- Albers,J.M., Bok R., Chen,C.H. et al.: Hyperpolarized C 13 lactate , pyrovate and alanine : noninvasive biomarkesr for prostate cancer detection and grading. Cancer Research. 2008; Vol. 68, 8607-8615.

الخلاصة:

في عصرنا الحديث يعتبر مرض السرطان من الامراض الخطرة والمهمة في مجتمعنا لذلك وضعنا هذه الدراسة لنسلط الضوء على هذا الجانب في مدينة هيت بسبب كثرة الحالات السرطانية المكتشفة هناك . وجدت هنالك 93 حالة للأمراض السرطانية خلال سنة كاملة من البحث والدراسة النسبة تكون (1:1397) معظم الحالات السرطانية كانت في مركز مدينة هيت وهي 55 حالة سرطانية(1:1091) اكثر الحالات السرطانية كانت في الجهاز الهضمي 31 حالة سرطانية(33و33%) ثم سرطانات امراض الدم والثدي 13,15 اقل الامراض السرطانية كانت موجودة في الجهاز الحركي، الجلد والجهاز العصبي(2) لكل منهم(2,10).% معظم الحالات السرطانية عاشوا 75 حالة (6,80%) وكانت نسبة الوفيات 18 حالة(3,19%) فقط مريض واحد (1,1%) من بين الذين عاشوا قد شفي بصورة كاملة لكن مع اصابة نفسية عميقة بينما 75 حالة سرطانية عاشوا مع عوق جسيمي كبير اضعف حركتهم مع معيشتهم الطبيعية.

نسبة كبيرة من الحالات السرطانية وجدت بين الرجال 50 حالة (53,77%) بينما النسبة لدى النساء 43 حالة(2,46%)

لذا نستنتج من ذلك ان نسبة السرطان قد ازدادت في منطقة هيت بنسبة كبيرة مع ازدياد نسبة الوفيات والعوق لدى المرضى بسبب التشخيص المتأخر وضعف الامكانية التشخيصية وقلة الوعي الصحي الاجتماعي.

من هذه الدراسة ننصح بتطوير الامكانيات الصحية في المؤسسات الطبية ونشر الوعي الصحي في المجتمع.