Original Article

Are Gastrointestinal Tract Malignancies, Diseases of Old Age? In South Western Region of Pakistan Too

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ABSTRACT

Purpose/Background: The majority of cancers affect older persons because aging is a high risk factor for this disease. Gastrointestinal tract malignancies are also considered disease that affects older patients, with a peak incidence in the sixth and seventh decades. Close to 60% of all newly diagnosed malignant tumors and 71% of all cancer deaths occur in persons in this age group according to the NCI surveillance, epidemiology and end results (SEER) program data. Aging population is more vulnerable to develop cancer caused by a lifetime exposure to carcinogen such as pollution, radiation, tobacco and harmful sunrays etc. **Objective:** The objective of this research was to study the gastrointestinal tract (GIT) malignancies in different age groups in our set up. **Design:** Retrospective study. **Duration:** From January 2001 to December 2010. **Method:** This 10 year review of patients with GIT cancers in different age groups was carried out at the Centre for Nuclear medicine and Radiotherapy (CENAR), Quetta south western region of Pakistan. Information extracted from the files of patients in record. **Results:** Out of 2269 patients, the most common age group was above 60 year with a total of 752(33%) patients. Among1178 patients of carcinoma (Ca) esophagus, 30% belong to above 60year age group, Whereas above 60 year age group is commonest age group for CaColorectum, Stomach, Liver, Gall bladder, Pancreas, Small intestine and Anal canal accounting for 35%, 37%, 40%, 37%, 36%, 40% and 33% respectively. **Conclusion:** Malignancy is associated with old age. Various GIT malignancies studied in our study showed that above 60 year age group being commonest.

Key words: GIT malignancies, Old age, CENAR, Quetta.

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INTRODUCTION

Biologically, a child is a human between the stages of birth and puberty. The Nations Convention on the Rights of the child defines a child as a human being below the age of 18 years unless under the law applicable to the child[1]. A young adult, according to Erik Erikson's stages of human development, is generally a person in the age range of 20 to 40.[2] Middle age is the period of age beyond young adulthood but before the onset of old age.

According to Collins Dictionary, this is usually considered to occur approximately between the ages of 41 and 60[3].When old age begins cannot be universally defined because it shifts according to the context. The United Nations has agreed that 60+ years may be usually denoted as old age but for its study of old age in Africa, the World Health Organization (WHO) set 50 as the beginning of old age. At the same time, the WHO recognized that the developing world often defines old age, not by years, but by new roles, loss of previous roles, or inability to make active contribution to

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society[4]. Cancer is primarily a diseaseof older people, with incidence rates increasing with age for mostcancers. More than three out of five (63%) cancers are diagnosed in people aged 65 and over, and more than a third (36%) are diagnosed inelderly (aged 75 and over)[5].Gastrointestinal tract malignancies aregenerally considered disease that effect olderpatients, with a peak incidence in the sixth and seventh decades[6].Cancer caused41% of all death in people aged between 25 and 74 in the UK during 2008-2010[7].

MATERIALS & METHODS

Retrospective data was collected; 2269 patients were included in this study attending the CENAR, hospital OPD from January 2001 to December 2010. Age of presentation noted. Patients were divided into different age groups; ≤20 year, 21-30year, 31-40year, 41-50year, 51-60year and above 60 year age group.

Out of 2269 patients, the most common age group was above 60 years with a total of 752(33%) patients. Among1178 patients of Ca oesophagus, 30% belong to above 60year age group, Whereas above 60 year age group is commonest age group for Ca Colorectum, Stomach, Liver, Gall bladder, Pancreas, Small intestine and Anal canal accounting for 35%, 37%, 40%, 37%, 36%, 40% and 33% respectively.

RESULTS

Distribution of 10 year data in different age groups

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
≤20 year	-	02	-	02	01	02	02	01	01	03	14
21-30 year	09	08	13	07	12	15	09	14	16	19	122
31-40 year	27	25	32	23	27	18	29	35	33	48	297
41-50 year	28	33	29	36	41	46	40	39	45	59	396
51-60 year	47	59	67	55	77	66	71	69	81	96	688
Above60 year	61	58	68	62	67	85	78	71	89	113	752
Total	172	185	209	185	225	232	229	229	265	338	2269

Distribution of CA esophagus patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	**09**	**0.7%**
21-30 year	**86**	**7.3%**
31-40 year	**195**	**16%**
41-50 year	**215**	**18%**
51-60 year	**324**	**28%**
Above60 year	**349**	**30%**
Total	**1178**	

Distribution of Ca stomach patients in age groups

Age Group	No. of patients	Percentage
≤20 year	**02**	**01%**
21-30 year	**08**	**03%**
31-40 year	**26**	**09%**
41-50 year	**42**	**15%**
51-60 year	**96**	**35%**
Above60 year	**102**	**37%**
Total	**276**	

Distribution of Ca Colorectum patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	-	-
21-30 year	**12**	**4%**
31-40 year	**32**	**10%**
41-50 year	**58**	**19%**
51-60 year	**101**	**32%**
Above60 year	**110**	**35%**
Total	**313**	

Distribution of Ca Liver patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	**03**	**01%**
21-30 year	**06**	**03%**
31-40 year	**18**	**08%**
41-50 year	**27**	**12%**
51-60 year	**83**	**36%**
Above60 year	**91**	**40%**
Total	**228**	

Distribution of Ca Gall bladder patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	-	-
21-30 year	**03**	**03%**
31-40 year	**08**	**08%**
41-50 year	**22**	**21%**
51-60 year	**32**	**31%**
Above60 year	**38**	**37%**
Total	**103**	

Distribution of Ca Pancreas patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	-	-
21-30 year	**04**	**06%**
31-40 year	**08**	**13%**
41-50 year	**11**	**17%**
51-60 year	**18**	**28%**
Above60 year	**23**	**36%**
Total	**64**	

Distribution of Ca Small intestine patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	-	-
21-30 year	**02**	**03%**
31-40 year	**04**	**07%**
41-50 year	**08**	**15%**
51-60 year	**19**	**35%**
Above60 year	**22**	**40%**
Total	**55**	

Distribution of Ca Anal canal patients in different age groups

Age Group	No. of patients	Percentage
≤20 year	-	-
21-30 year	**01**	**02%**
31-40 year	**06**	**11%**
41-50 year	**13**	**25%**
51-60 year	**15**	**29%**
Above60 year	**17**	**33%**
Total	**52**	

DISCUSSION

Malignancy is considered a disease of older people but in our set up mostly patients present in younger age groups. However results of our study clearly indicate that still malignancy is most common after 60year of age.

Ca Esophagus:

Esophageal cancer is the 8th most common cancer worldwide and the sixth most common cause of cancer related death[8]. Data from the Surveillance Epidemiology and End Results (SEER) program indicate that 27.5% patients belong to 55-64year age group followed by 26.9% patients belongs to 45-54 year age group[9]. The median age at presentation is 67years according to data from US[10]. In Zubair Ahmad et al (2013)[11] mean age was lower in femalesi.e 50 years compared to 56 years in males. 0.7% patients in our studyoccurred in 20 years ofage or younger. However, 18% occurred in the age group 41-50 and 28% occurred in the age group 51-60 years. Hence, 30%cases occurred in patients60 year or above. 8.5% esophageal carcinoma occurred in patients 19 year of age or younger [12]Roohullah et al [13]study in Balochistan indicates high incidence of Ca esophagus in younger age group 41-50 year (40%). In Bafandeh et al(2006) [14]from Iran mean age was 61 year while in our study (30%) patients belong to above 60 year age group is confirming the fact that Ca esophagus is disease of old age.

Ca Colorectum:

The incidence of Colorectum cancer is higher in developed country than in developing country. In developed counties it is among the third most common cancer and is commonest gastro intestinal neoplasm.[15]The median age at diagnosis for cancer of the colon and rectum in the US was 69 year of age from 2005-2009[16].In Bhurgri et al [17](2011) the mean age ranging from 43.7-51.2 years similarly another study performed in Iran the mean age of colorectal cancer was 52 year (youngest 16 and oldest 79 year of age).[18]It is particularly a disease affecting persons above 40 year of age with 90% cases occurring in person over the age of 50 year.[19]Incidence of colorectal carcinoma in both males and females is more in the 41-60 years age groups i.e 45% and 42.9%[20].Our study shows a similar pattern with 35% patients in above 60 year age group.

Ca Stomach:

Ca Stomach is expected to remain the fourth most common malignancy in the world in 2007, with an estimated one million new cases. Stomach cancer is the second leading cause of cancer death in men and fourth among women[21]. Gastric cancer rarely

occurs before 40 year of age. From 40 onwards the incidence of stomach Ca increases with increasing age, to highest among those ages 80 years or older.[8]In Sajjad Karim(2014)[22] 87% patients belongs to 40 year or above age group. Study from Pakistan has also demonstrated a rising incidence of gastric cancer, with mean ages of 51.9 years and 48.8 in males and females respectively. Mean age of gastric cancer is 63.3±12.5 years.[23]According to SEER fact sheet the median age at diagnosis for cancer of the stomach was 69 years of age from 2006-2010[9]. In our study, 37% patients belonged to above 60 year age group, confirming the fact that Ca stomach is disease of old age.

Ca Liver:

Liver cancer is one of the most common forms of cancer in world, but it is uncommon in the United States. Liver cancer diagnosis rates are increasing in the United States[24]. The median age at diagnosis for cancer of liver was 63 years of age according to SEER fact sheet(2006-2010)[9]while in our study, 40% patients belonged to above 60 year age group.

Ca Gall Bladder:

Ca Gall bladder is rare, with around 670 new cases in the UK each year. It'svery rare in people under 50 andis most often seen in people over 70 States. [25]According to American cancer society Gall bladder cancer is seen mainly in older people but younger people can develop it also. The average age of people when they are diagnosed is 72. More than 2 out of 3 people with Gall bladder cancer are 65 or older when it is found. [26]In zubair et al (2014) [11]it was seen predominantely in females with mean age around 50 years. According to another study Gall bladder cancer is twice more common in women than men, mostly between the age of 50 and 60.[27]In our study, 37% patients belonged to above 60 year age group but Ca Gall bladder showed interesting age distribution, 31% patients belonged to 51-60 year age group and 21% belonged to 41-50 year age group. This pattern is completely different from pattern reported in western studies.

Ca Pancreas:

Each year more than 30,000 people in the United States are diagnosed with cancer of pancreas and more than twice that in Europe. Most of these people will have passed away by the end of the first year. The incidence of pancreatic cancer increases with age; most people are between the ages of 60 to 80 when they are diagnosed[21]. According to another study, the risk of malignancy increases markedly after the age of 50 with most patients diagnosed between 65 and 80 years of age[8]. The median age at diagnosis for cancer of pancreas was 71 year of age from 2006-2010[9.] In our study, 36% patients belonged to above 60 year age group and 28% patients belonged to51-60 year age group, a trend different to other studies but confirming the fact that carcinoma is disease of old age.

Ca Small Intestine:

Ca Small intestine is quite uncommon and accounts for less than 2% of all gastrointestinalcancer[28]. Small bowel prevalence is lower in Asia and in less industrialized countries than in western countries. The prevalence of small bowel cancer trends to increase with age, with a mean age at diagnosis of approximately 60 years[29]. According to SEER fact sheet, the median age at diagnosis for cancer of the small intestine was 66 years of age.[9]similarly in our study, 40% patients belonged to above 60 year age group

Ca Anal Canal:

Anal canal is an uncommon malignancy. Most Anal cancers(80%) are diagnosed in people who are over the age of 60 and prior to age 35. Anal cancer is more common in men. However, after age 50, anal cancer is slightly more common in women[30.]According to another study, 6230 new cases of anal cancer would be diagnosed in the United States. It is typically found in adults, average age early 60s.[31]According to American cancer society, most of the cases of anal cancer develop in people over age 55, 1/3rd of the cases occur in patients that are younger than that[32]Similarly in our study 33% patients belonged to above 60 year age group followed by 29% patients belonged to 51-60 year age group, confirming the fact that malignancy is disease of old age.

Most finding in the present study did not concur with published western data because Pakistan has low life expectancy than other European countries, these countries have average age of their

individual citizen around 80 years, unfortunately Pakistan has average age of its citizen around 60 years. In Pakistan main reasons for low life expectancy are low social economical status, low literacy, poor health care system and poverty.

CONCLUSION

The results of our study proved that malignancy is associated with old age. Various GIT malignancies studied in our study showed that above 60 year age group being commonest.

Pakistan has low life expectancy than other European countries, these countries have average age of their individual citizen around 80 years while in Pakistan average age of its citizen around 60 years that's why most finding in the present study did not concur with published western data but confirming the fact that malignancy is disease of old age.

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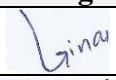
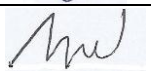
Dr. Hina Manzoor	1st Author	
Dr. Fayyaz Ahmad	2nd Author	
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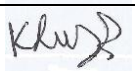
Dr. Hafiz Khushnaseeb Ahmad	4th Author	
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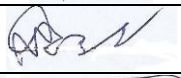
Dr. Mohammad Sadiq	7th Author	
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