Delay in Diagnosis of Geriatic Cancer - A Retrospective Analysis

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Abstract: *This study delves into the critical issues surrounding cancer care in the elderly, particularly focusing on the Indian demographic. The research, approved by an institutional ethics committee, involved analyzing patient records and conducting interviews at a hospital to understand the time taken for cancer diagnosis and initiation of treatment in older patients. Key findings reveal significant delays in both diagnosis and treatment across various cancer types, with the average time for diagnosis and treatment commencement ranging differently among age groups. Factors contributing to these delays include lack of finances, social isolation, geographical challenges, alternative therapy choices, and logistical issues. The study highlights the need for increased awareness and government intervention to provide affordable cancer treatment, aiming to improve the quality of life and survival rates in this vulnerable population.*

Keywords: Geriatric Oncology, Cancer Diagnosis Delay, Treatment Initiation, Elderly Cancer Care in India, Healthcare Access Barriers

1. Introduction

The number of older persons with cancer is expected to significantly increase because of the overall aging of the population and the fact that cancer incidence and mortality rises exponentially in the 65 & above old age groups (1). The increasing caseload of older patients with cancer will present great challenges to all components of the health care systems. As a result, there is a great need for clinical research to identify and implement evidence - based, best practices to eliminate pain and suffering from cancer in older patients, enhance their quality of life and extend their meaningful survival. For this, it is required that early diagnosis of malignancies should be done and promptly treatment should be started on time using various modalities available. Clinical presentation based investigation have become more important in elderly cancer patients due to limited financial resources available for investigation as well as treatment. Older cancer patients with locally advanced or metastatic disease may benefit from chemotherapy/hormonal therapy or combined with radiotherapy. Immunity of cancer patients is less so pattern of cancer is different, Immunotherapy has less effect on the elderly patient's bone marrow compared to chemotherapy but it is extremely costly (3). Geriatric cancer patients have 6 complex issues of frailty, comorbidity, discrimination, tolerance, insurance and transportation (4). These result in presentation at advance stage of cancer, difficulty in lying down without motion for various radiological investigation and suboptimal feasibility in execution of radiotherapy, chemotherapy, hormonal therapy and surgical treatment. Worrisome toxicities of these treatments in aging patients may require dose reduction but that may result in potential loss of efficacy (5). With life style changes and other advancements along with the increase in cancer incidence especially among elderly, due to reasons like ignorance and reluctance towards their health and sometimes lack of care givers at home as some children work away from their families, subsequently there is delay in diagnosis & treatment (6). Moreover, people have developed tendency to search for their symptoms on internet and taking some treatment themselves. As a result, diagnosis is often delayed and treatment is started late making prognosis poor.

2. Materials and Methods

This study was approved by the institutional ethics committee. A signed inform consent was obtained from each participant/legal guardian. The interview was conducted in the hospital premises while the patients presented to the OPD. Patient records were viewed and analyzed for clinical presentation and computing time taken for diagnosis & start of treatment along with a pre - structured case report form was used for the same. The patients were further followed up monthly to ensure follow up of all patients till 3 months for calculating survival outcomes by doing survival analysis and Kaplan - Meier curves were constructed. The data collected was tabulated and analyzed using the statistical package of SPSS VERSION 23.0 trial version. Appropriate statistical tests were applied to analyze the data.

Inclusion criteria:
1) Male or female patient ≥ 65 years of age according to legal identity card of local constitution.
2) Patients with a diagnosis of malignancy with solid cancer irrespective of the stage as evidenced by one or more clinical features either confirmed by biopsy or any other tests.

Exclusion criteria:
1) Presence of a condition or abnormality that in the opinion of the investigator would compromise the safety of the patient or the quality of the data will be excluded.
2) Patients unable to give an informed consent were excluded.

3. Results

Time taken in diagnosis and treatment:

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Table 1: Average time taken in diagnosis (in days)

Site of Cancer	Age Group	
	65 - 75 years	76 - 85 years
Head & neck	12 days	6 days
Gastrointestinal	5 days	8 days
Genitourinary	9 days	6 days
Others	9 days	7 days

Table 2: Average time taken to start treatment (in days)

Site of Cancer	Age Group	
	65 - 75 years	76 - 85 years
Head & neck	14 days	15 days
Gastrointestinal	6 days	24 days
Genitourinary	13 days	3 days
Others	6 days	2 days

Overall data of time taken to make diagnosis from the very first visit of patients to being diagnosed with various cancers has been tabulated in table no.3 and analyzed. It was calculated in days with two different age groups of geriatric cancer patients for the ease of understanding the data. The mean time taken to make diagnosis for patients with head & neck cancers was 11 days (12 days in 65 - 75 years of age group and 6 days in 76 - 85 years of age group); maximum time taken was 106 days. The mean time taken in gastrointestinal cancers was 6 days (5 days in 65 - 75 years of age group and 8 days in 76 - 85 years of age group); maximum was 22 days. In genitourinary cancer, mean time taken was 8 days (9 days in 65 - 75 years of age group and 6 days in 76 - 85 years of age group); maximum was 35 days while in other cancers, it was 9 days (9 days in 65 - 75 years of age group and 7 days in 76 - 85 years of age group); maximum delay was 66 days.

All of the patient data to start treatment from the diagnosed date with various cancers was tabulated in table no.4 and analyzed. The time taken to start treatment was calculated in days with two different age groups in geriatric cancer patients. The mean time to start the treatment of head & neck cancer patients was 14 days (14 days in 65 - 75 years of age group and 15 days in 76 - 85 years of age group); maximum delay was 61 days and 1 was not responding to treatment. However, in gastrointestinal cancers mean time to start the treatment was 8 days (6 days in 65 - 75 years of age group and 24 days in 76 - 85 years of age group); maximum delay was 39 days and 3 were not responding to their treatment. In genitourinary cancers the mean time taken was 11 days (13 days in 65 - 75 years of age group and 3 days in 76 - 85 years of age group); maximum delay was 42 days and 5 were not responding to treatment. While in other cancers patient took an average time to start treatment was 5 days (6 days in 65 - 75 years of age group and 2 days in 76 - 85 years of age group); maximum delay was 26 days and 8 were not responding to treatment. Table 3 summaries five major reasons of delay to start treatment in our study.
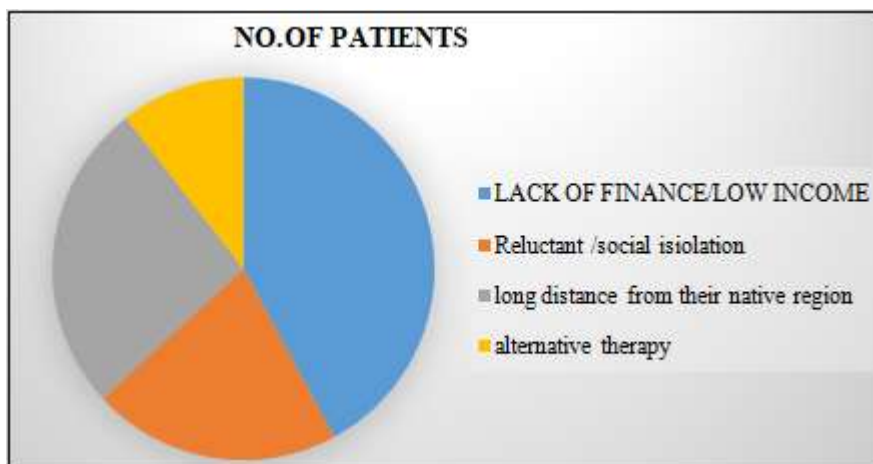

Table 3: Reasons of delay to start treatment

S. N.	Reasons	Number of patients n= 25 (%)
1	Lack of finances / low income	8 (32%)
2	Reluctant / social isolation	4 (16%)
3	Long distances from their native regions / wanted to go someplace else	5 (20%)
4	Alternative therapies	2 (8%)
5	Lack of logistics	6 (24%)

4. Conclusion

In the present study, geriatric cancer patients usually delayed their diagnosis while some delayed in treatment, due to this their quality of life gets deteriorated, also affecting mortality increment among them. . There are very few studies on Indian population elaborating clinical characteristics, delaying in diagnosis and start of treatment in geriatric cancer population. There is still need to increase awareness about government policies to get cancer treatment free or at low cost which will further increase quality of life and survival rate among these patients. Without consideration and community support these issues cannot be resolved.

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