Cause of Delay in Treatment in Cases of Abdominal Malignancies

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ABSTRACT

BACKGROUND

Abdominal malignancies are a common problem in the western countries and is on a rise in India. This study was conducted to evaluate the reasons for delay in diagnosis and treatment of cancer.

METHODS

This is a prospective observational study conducted in the Department of Surgery Acharya Vinobha Bhave Rural Hospital, Sawangi (Meghe), Wardha, for a period of 2 years with a sample size of 46 patients.

RESULTS

Delay in presentation was noted in 74% of patients. Among them 'taking local treatment' was considered to be the main cause of delay in treatment. There was delay in diagnosis in 8 % of patients. There was delay in initiation of treatment in 18 % of patients.

CONCLUSIONS

Most of the patients presented in advanced stages to the hospital because of taking local treatment, due to lack of awareness, belief in herbal and ayurvedic treatment, poor financial resources, and fear of surgery. The proper treatment was delayed or denied leading to poor overall outcome.

KEY WORDS

Delay, Presentation, Diagnosis, Treatment

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BACKGROUND

Abdominal malignancies are a common problem in the western countries and is on a rise in India due to changes in lifestyle. Lifestyle factors include smoking, obesity, increased consumption of red meat, processed foods and increased incidence of diabetes mellitus.¹ Colorectal cancer is the 3rd most common in males and 2nd most common in females. Gastric cancer is the 4th and 7th most common in males and females, respectively. Liver cancer is the 5th and 9th most common cancer in males and females, respectively. Gall bladder, pancreas and small intestine cancers are less common. In men liver, stomach, colorectal and pancreas are the 2nd, 3rd, 4th and 7th leading causes of mortality whereas in the female it is 6th, 4th, 3rd and 7th respectively.²

Several reasons for delays are seen in initiation of cancer treatment. Primary delay is the duration from beginning of symptoms to presenting to the doctor and secondary delay is from presenting to the doctor to initiation of treatment.¹ Primary delay (PD) is also called patient delay because these reasons are from the patient such as lack of awareness, low socio-economic status, financial problems etc. Secondary or doctor delay (SD) includes the patient's characteristics as well as doctor and system related reasons.¹ The practice of patients seeing one general physician (GP) throughout their lifetime is reducing, and patients report less continuity of care and more difficulty in seeing a consistent doctor.³

Within the patient interval there are two component intervals; symptom appraisal (the period between detecting a bodily change and deciding that there is a need to discuss the symptoms with a health care practitioner) and help-seeking (the period from perceiving a need to discuss the symptoms with a health care practitioner to the first consultation). Symptom misinterpretation is frequently reported, with patients believing their symptoms are the result of minor ailments, physical exertion, stress, connected to pre-existing conditions, ageing or expected bodily changes.

Fear plays an important yet unclear role in help-seeking. Fear can manifest itself as a fear of cancer or of the investigations and treatments associated with it. Fear of embarrassment and shame can also act as a barrier to presentation, particularly when symptoms are located in 'private' areas of the body. Some patients only report their symptoms during consultations for other conditions or monitor their symptoms in order to accumulate 'evidence' to justify presentation. Social context has been shown to influence the timing of help-seeking, particularly the prioritisation of other life events. Social networks are also thought to be influential, through the sanctioning of help-seeking, and / or identification of symptoms.⁴

In the hospital, delays may be from doctors' side in reaching a diagnosis and initiation of treatment. A doctors' delay in reaching to a diagnosis is duration from primary care referral to diagnosis. Diagnostic delay may occur if many invasive investigations are required to reach or for confirmation of the diagnosis and to determine the operability and appropriate surgical treatment.² Delays in primary care can be related to diagnostic error, with cancer the most widely identified condition associated with diagnostic error in primary care. Features associated with diagnostic error include atypical presentations, non-specific presentations, very low prevalence of the disease in the general population

and comorbidities.⁵ Apart from the various prognostic factors individually discussed for cancers, delay in the diagnosis and treatment forms an important factor for adverse outcomes.² Abdominal malignancies due to their non-specific signs and symptoms may also have a delayed diagnosis and presentation which can lead to delay in the diagnosis and management.³

This study was conducted to evaluate the various causes of delay in diagnosis and treatment of malignancies.

METHODS

The current study was conducted in the Department of Surgery at a rural tertiary health care centre – Acharya Vinobha Bhawe Rural Hospital, Sawangi (Meghe), Wardha. It is a prospective observational study conducted over a period of 2 years (from September 2018 to August 2020). All patients attending Department of Surgery OPD and admitted to AVBRH hospital for the treatment of abdominal malignancies were included in the study. Patients with gynaecological cancers, urological cancers and malignancies of sites other than abdomen were excluded from the study. 46 patients were included in this study.

Data Collection

Patients eligible for the study were identified based on the inclusion and exclusion criteria. A detailed history was taken from each of the patients regarding the appearance of symptoms and the reason for delay in presentation to the hospital. They were observed throughout their hospital stay. The reason for delay in diagnosis and initiation of treatment were noted.

Data Compilation and Presentation

The collected data was compiled. A master table was prepared, and the data set was subdivided and distributed and presented as individual tables along with graphs on a Microsoft Excel Worksheet (Microsoft, USA).

RESULTS

In the present study, out of 46 patients, 34 patients presented late to hospital, 14 (41 %) patients (2 stomach, 1 pancreas, 4 proximal colon, 2 distal colon and 5 rectum & anal canal) due to taking local symptomatic treatment without definitive diagnosis, 6 (17 %) patients (1 stomach, 1 gall bladder, 1 distal colon and 3 rectum & anal canal) due to lack of awareness, 5 (15 %) patients (2 pancreas, 1 distal colon and 2 rectum & anal canal) due to taking herbal treatment, 4 (12 %) patients (2 proximal colon, 1 distal colon and 1 rectum & anal canal) due to financial reasons, 3 (9 %) patients (1 proximal colon and 2 rectum & anal canal) due to ayurvedic treatment without definitive diagnosis and 2 (6 %) patients (1 stomach and 1 rectum & anal canal) due to not willing for surgery.

In the present study, out of 46 patients, in 4 patients there was delay in diagnosis, in 2 (50 %) patients (1 pancreas and 1 proximal colon) delay was due to poor compliance of the patients, in 1 (25 %) patient (1 distal colon) delay was due to

non-availability of particular doctor, in 1 (25 %) patient (1 distal colon) delay was due to repeated biopsies needed for confirmation.

Reason for Delay in Presentation	Number of Patients (N = 34)	Percentage
Local treatment	14	41 %
Lack of awareness	6	17 %
Herbal treatment	5	15 %
Financial reasons	4	12 %
Ayurvedic treatment	3	9 %
Not willing for surgery	2	6 %

Table 1. Reasons for Delay in Presentation

Reason for Delay in Diagnosis	Number of Patients (N = 4)	%
Poor compliance	2	50 %
Needed repeated biopsies for confirmation	1	25 %
Doctor was on leave	1	25 %

Table 2. Reasons for Delay in Diagnosis

Reason for Delay in Treatment	Number of Patients (N = 8)	Percentage
Delay in diagnosis	2	25 %
Non availability of OT	2	25 %
Non availability of blood	1	12.5 %
Patient factors	1	12.5 %
Delay in insurance	2	25 %

Table 3. Reasons for Delay in Treatment

	Good	Poor	P-Value is 0.1772
Early	1	6	
Delay	16	23	

Table 4. Correlation of the Time of Presentation, Diagnosis and Treatment to Final Outcome of the Patient

P value is 0.1772 and is not significant.

In the present study, treatment was delayed in 8 patients, in 2 (25 %) patients (2 distal colon) due to delay in diagnosis due to poor patient compliance, in 2 (25 %) patients (1 stomach and 1 distal colon) delay was due to non-availability of operation theatre (OT) due to many holidays, in 1 (14 %) patient due to non-availability of B negative blood, in 1 (14 %) patient (1 proximal colon) due to patient delaying treatment due to family programme and in 2 (29 %) patients (1 proximal colon and 1 distal colon) due to delay in insurance.

In the present study, out of 46 patients, 7 patients presented early, 1 had good outcome and 6 patients had poor outcome. 39 patients either presented late to hospital, or the diagnosis was delayed, or the treatment was delayed; 16 patients had good outcome and 23 patients had poor outcome.

DISCUSSION

Vivek Tiwari et al. in their study concluded that the patient's factors are the major causes of delay as compared to hospital factors. Reasons for this delay comprised of unawareness regarding the signs and symptoms of cancer, consultation with unqualified local practitioners / no consultation, use of alternative medication, poor socio-economic conditions and lack of a proper referral infrastructure.⁶

A K Dwivedi et al. in their study observed the causes for delay in presentation in 54.6 % patients due to lack of awareness, 12.4 % patients due to economic problems, 3.5 % patients due to fear of cancer, 4.5 % patients distance

problems, 8.7 % due to family problems, 30 % of the patients made more than two medical contacts for confirming the diagnosis.⁷ Hospital factors as cause of delay include in 27.5 % patients inappropriate diagnosis, 50 % patients were advised symptomatic treatment before establishment of diagnosis, 7 % of the patients were assured that the disease is not a matter of serious concern and 60 % of the patients contacted small clinics / primary health centres.⁷

Mohammed H al azri et al. in their study observed that a delay in cancer diagnosis can occur at various levels. The patient may fail to recognise suspicious cancer symptoms or act on them. The primary care physician may not recognise patients with suspicious cancer symptoms and may not advise for proper investigation or may not refer the cancer patients on time. Patients with suspicious cancer in secondary care may not be seen on time, or they may be referred to the wrong specialty.⁵ My study is correlating with Vivek Tiwari et al., A K Dwivedi et al. and Mohammed H al azri et al.

Most of the patients presented in advanced stages to the hospital because of taking local treatment (41 %) or moving from one doctor to other. This is because there is lack of awareness (17 %), belief in herbal (15 %) and ayurvedic (9 %) treatment, poor financial resources (12 %), and fear for surgery (6 %). The proper treatment is delayed or denied leading to poor overall outcome.

Delay in diagnosis is again mainly due to poor compliance of patient being irregular for investigations due to personal reasons (50 %). The other reasons are non-availability of particular doctor (25 %), repeated negative biopsy reports (25 %). Delay in treatment is mainly due to delay in diagnosis (25 %) as biopsies were either inadequate tissue or reported as definite opinion could not be given, non-availability of OT (25 %) or delay in MJPJAY (25 %).

CONCLUSIONS

There are many social, familial and personal factors in delay and that can only be tackled if social workers remain in contact with these patients and promote and counsel them to take advised treatment. A health education and screening program should be implemented in the rural areas. This will help in reducing the delay in presentation to the hospital. Patients should be guided regarding the necessity of treatment. Patients should be provided facility of insurance schemes and free health care facilities so that the patients do not refuse treatment. Transportation facilities between the health care centre and rural areas improve the communication and prevents delayed presentation. Prevention of delay in presentation, proper screening tests, and counselling of high-risk groups will reduce delay. It will also help in early detection of these malignancies.

Old age of patient, lack of family support, poor financial condition, obtaining local treatment / ayurvedic treatment, symptoms being neglected by people or misinterpreted by local doctor, lack of medical help, non-availability of investigation tools, poor government facilities, heavy patient load and fear within the patient to go to the hospital are important factors.

Sl. No.	Patient ID	Age	Sex	Early / Delayed	Patient Factors / Hospital Factors		Surgery Done / Not	Outcome
1	1812080021	50	Male	Delayed	Patient factors	Herbal treatment	Anterior Resection	Good
2	1806150032	35	Male	Delayed	Patient factors & hospital factors	Local treatment & delayed insurance scheme approval	Right hemicolectomy	Good
3	1806260119	35	Male	Delayed	Patient factors	Ayurvedic treatment	Abdominoperineal resection	Good
4	1904160009	56	Female	Delayed	Hospital factors	Non availability of OT	Abdominoperineal resection	Poor
5	1907220207	45	Male	Delayed	Hospital factors	Doctor was unavailable	Left hemicolectomy	Good
6	1810020012	40	Female	Delayed	Hospital factors	Multiple biopsies	Palliative	Death
7	1811080015	50	Female	Delayed	Patient factors	Local treatment	Right hemicolectomy	Good
8	1902050053	57	Male	Delayed	Patient factors & hospital factors	Irregular for investigations & delay in diagnosis	Palliative	Death
9	1903180108	62	Female	Delayed	Patient factors	Local treatment	Palliative	Death
10	1906180169	66	Male	Delayed	Hospital factors	Non availability of blood	Anterior resection	Good
11	1807280025	55	Male	Delayed	Patient factors	Not willing for surgery	Palliative	Death
12	1910300135	45	Female	Delayed	Patient factors	Herbal treatment	Palliative	Death
13	1905160113	70	Male	Early	-	-	Palliative	Death
14	1902220108	44	Female	Early	-	-	Resection and anastomosis	Death
15	1905230064	50	Female	Delayed	Patient factors	Lack of awareness	Anterior resection	Good
16	1903080037	58	Male	Delayed	Patient factors & hospital factors	Lack of awareness	Abdominoperineal resection	Death
17	1902230042	44	Female	Early	-	-	Laparoscopic cholecystectomy	Good
18	1807170066	45	Female	Delayed	Patient factors	Financial reasons	Palliative	Death
19	1910310093	58	Male	Delayed	Patient factors	Local treatment	Palliative	Death
20	1810120048	55	Female	Delayed	Patient factors	Lack of awareness & non availability of OT	Gastrectomy	Death
21	1908260091	60	Female	Delayed	Patient factors	Financial reasons	Left hemicolectomy	Good
22	1907240068	65	Male	Delayed	Patient factors	Local treatment	Anterior resection	Good
23	1909230109	42	Female	Delayed	Hospital factors	Local treatment	Resection and anastomosis	Good
24	1808280158	72	Female	Delayed	Patient factors	Lack of awareness	Palliative	Death
25	1812230021	58	Male	Delayed	Patient factors	Local treatment	Palliative	Death
26	1901170051	59	Male	Delayed	Patient factors	Herbal treatment	Palliative	Death
27	1904180046	62	Female	Delayed	Patient factors & hospital factors	Ayurvedic treatment	Abdominoperineal resection	Good
28	1908140062	55	Male	Early	-	-	Palliative	Death
29	1808230016	44	Male	Delayed	Patient factors & hospital factors	Local treatment	Palliative	Death
30	1904160106	73	Female	Early	-	-	Right hemicolectomy	Death
31	1901240028	40	Female	Delayed	Patient factors & hospital factors	Lack of awareness & delayed insurance scheme approval	Abdominoperineal resection	Death
32	1809290089	87	Female	Delayed	Patient factors & hospital factors	Local treatment	Abdominoperineal resection	Death
33	1810030021	40	Female	Delayed	Patient factors & hospital factors	Lack of awareness	Anterior resection	Good
34	1902150035	48	Female	Delayed	Patient factors & hospital factors	Local treatment	Abdominoperineal resection	Good
35	1904170030	55	Female	Delayed	Patient factors	Herbal treatment	Palliative	Death
36	1905140048	49	Male	Delayed	Patient factors & hospital factors	Not willing for surgery	Gastrectomy	Good
37	1903220023	55	Male	Delayed	Patient factors & hospital factors	Ayurvedic treatment	Right hemicolectomy	Death
38	1907080120	46	Male	Delayed	Patient factors	Financial reasons	Palliative	Death
39	1907080031	57	Male	Delayed	Patient factors	Local treatment	Palliative	Death
40	1811220040	65	Male	Delayed	Patient factors	Herbal treatment	Abdominoperineal resection	Good
41	1806050107	60	Male	Delayed	Patient factors	Local treatment	Palliative	Death
42	1903060085	60	Female	Delayed	Patient factors & hospital factors	Financial reasons	Right hemicolectomy	Good
43	1811230007	58	Male	Delayed	Patient factors	Local treatment & irregular for investigations	Right hemicolectomy	Poor
44	1807110030	68	Male	Delayed	Patient factors	Local treatment	Palliative	Death
45	1810260128	65	Male	Early	-	-	Palliative	Death
46	1909180078	50	Female	Early	-	-	Palliative	Death

Table 5. Master Chart on Delay

Cost involved add to the agony. Slow moving hospital evaluation, incompleteness of investigations, non-availability of blood, drugs and specific treating doctor, and non-availability of OT time are resource related causes. Social backup and security, streamlining hospital functioning, availability of infra-structure and facilities, utilisation of social workers are very important. The following steps should be taken-

1. Village level – Training of social worker & peripheral health worker.
2. Doctor's training – Medical education program.
3. Hospital structure – Screening, identification targeted clinics with medical team support and staff.
4. Comfort, assurance, counselling to patient.
5. Early disposal – Diagnosis and treatment at subsidised cost / insurance.
6. Post-operative follow up and care – Social worker and peripheral health worker.

Data sharing statement provided by the authors is available with the full text of this article at jemds.com.

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