Original Research Article

Factors causing delay in diagnosis of head and neck malignancy

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ABSTRACT

Background: Besides etiological factors there are lots of other factors which are responsible for the delay of diagnosis in head and neck malignancies. These include socio-demographic, institutional and other psychological factors. The aim of our article was to emphasize the importance of these unexplored factors in the delay of diagnosis of head and neck malignancies and make an effort to reduce those.

Methods: A total of 40 cases of head and neck malignancies in ENT ward of DUPMC hospital were studied. A retrospective study was undertaken using proper history taking and analysis of the patients.

Results: The factors causing delay in the diagnosis were found to delay due to psychological and behavioral 32.5%, delay due to symptom recognition 87.5%, delay due to socio demographic 45%, practioner delay-10%, hospital delay-5%.

Conclusions: Measures must be taken to reduce the factors causing deal in diagnosis like, Fear and anxiety about ultimate outcome of cancer should be allayed through various media and stress should be laid on fact that early detection can alter outcome of cancer so as to induce the patient to seek medical help early. Facilities for diagnosis of cancer should be available at accessible centre and only treatment should be left to certain specialized centers.

Keywords: Cancer, Delay, Factors

INTRODUCTION

According to the National cancer control programme cancer is one of the ten leading causes of death in India. Every year 7 lakh people are diagnosed of cancer and 3 lakhs die due to disease.

Treatment availability, quality of care, screening programmes and effectiveness of public health initiatives are among the factors likely to be implicated in better prognosis and survival rates in cancer. However delay in diagnosis has been suggested as a major contributor for cancer related mortality especially in head and neck malignancies. We as ENT surgeon want to give best results after treatment in cancer to our patient. But it become impossible if patient gets diagnosed at late stage of malignancy. We in this paper want to study the causes of delay of diagnosis so that it can be worked upon to reduce the incidence of cancer and achieve better prognosis.

This research article takes clue from NPSA work on theme of delayed diagnosis. The National Patient safety Agency (NPSA) (UK) began a programme of work in 2007 to improve patient safety in cancer. The programme consists of three main areas - radiotherapy, chemotherapy and delayed diagnosis. Early diagnosis is important for good prognosis. According to National patient safety Agency, programme (2007) delay in diagnosis can be described under following headings, i.e. when one who

has cancer and is not investigated or referred for investigation or is not diagnosed at time of investigation, or is diagnosed incorrectly, or when positive test results or diagnosis is not communicated effectively to clinician with ability to act on information, or when positive test results or diagnosis is not acted upon and treatment commenced as appropriate.

According to the Hansen, categorisation of delay in cancer diagnosing pathway is as under.[1]

Patient delay: due to patient related factors.

Doctor delay: primarily seen as primary care practioner delay.

System delay: primarily seen as hospital or secondary care delay.

According to Anderson et al, staging for total patient delay is as under.[2]

Appraisal: delay in symptom interpretation.

Illness: delay in decision to seek medical attention.

Behaviour: delay in making an appointment.

Scheduling: delay in time from making appointment to being seen.

Treatment: delay in receiving treatment.

According to studies by Amir, Onizawa the mean length of delay in diagnosis of cancer ranges from 1.7 to 5.6 months.[3,4] So, we consider delay as duration of time between first appearance of symptom and consultation with health care that is of 2 months or more.

Aims and objectives of the study are as under,

To determine the causes responsible for delay in diagnosis and treatment of head and neck malignancy. These include psychological and behavioral, symptom recognition related delay, delay due to socio demographic, practioner delay and hospital delay.

The aim of our article was to emphasize the importance of these unexplored factors in the delay of diagnosis of head and neck malignancies and make an effort to reduce those.

METHODS

This study comprises of 40 patients of head and neck malignances admitted in the ENT ward of DUPMC hospital. All the patients were admitted during the time period of May to December 2017. The patients comprised of malignancies of head and neck like ca buccal mucosa,

ca tongue, ca alveolus, ca thyroid, ca larynx, ca tonsil etc. We consider delay as duration of time between first appearance of symptom and consultation with health care that is 2months or more. The patients with symptoms less than two months were not included in the study.

Inclusion criteria

Inclusion criteria were patients with duration of symptoms for 2 months or more than 2 months.

Exclusion criteria

Exclusion criteria were patients who were not willing to co operate for the study were excluded from the study; patients with malignancies other than head and neck cancer.

The ethical approval was taken from the institutional ethical society.

Data collection from all patients was done using questionnaires. The questionnaire contained questions related to age, sex, marital status, socioeconomic status, addictions, time taken for symptom recognition,, fears associated with the disease, no of visits to practioner, hospital related delays.

Confirmation of malignancy was done by histopathological reports. The TNM classification of malignant tumours was used for staging of the cancer.

A cross sectional study was done and the statistical method used for the study was descriptive statistics with frequency and percentage tables.

RESULTS

This study comprises of 40 patients of head and neck malignancies admitted in the ENT ward of DUPMC hospital. All the patients were admitted during the time period of May to December 2017. The patients comprised of malignancies of head and neck.

Table 1: Age distribution.

Age in years	No. of cases
21-30	1
31-40	6
41-50	3
51-60	12
61-70	10
71-80	8
Total	40

Out of the 40 patients studied maximum were in the age group of 51 -60 years, 12 patients i.e. 30%. Others were 1 in age group of 21-30 years, 6 in age group of 31-40

years, 3 in age group of 41-50 years, 10 in age group of 61-70 years, and 8 in age group of 71-80 years.

Table 2: Sex distribution.

Sex	No of cases	Percentage (%)
Male	31	77
Female	9	23
Total	40	100

Out of the 40 patients studied 77% were male and rest 23% were females.

Table 3: Stage wise distribution.

Stage	No of cases	Percentage (%)
1	3	7.5
2	3	7.5
3	13	32.5
4	21	52.5
total	40	100

Out of the 40 patients, the percentage of patients in stage 1, 2, 3 and 4 were 7.5, 7.5, 32.5 and 52.5% respectively.

Table 4: Addiction.

Addiction	No of cases	Percentage (%)
Alcohol	8	20
Tobacco	24	60
Gutkha	4	10
None	4	10
Total	40	100

Out of the 40 patients studied 20% had alcohol addiction, 60% had tobacco addiction, 10% gutka addiction and just 10% had no addiction.

Table 5: Psychological delay (fear and anxiety).

Psychological	No of cases	Percentage (%)
Yes	13	32.5
No	27	67.5
Total	40	100

Factors causing psychological delay were present in 32.5% of cases i.e. in 13 patients evaluated, while they were not present in 67.5% cases i.e. in 27 cases.

Table 6: Sociodemographic delay (marital status, socioeconomic status, age).

Sociodemographic	No of cases	Percentage (%)
Yes	18	45
No	22	55
Total	40	100

Factors causing socio-demographic delay like marital status, socioeconomic status, age and others were responsible for delay in 18 patients i.e. in 45% cases.

While they were not present in 22 i.e. 55% cases.

Table 7: Practioner delay.

No of visits	No of cases	Percentage (%)
0	22	55
1	14	35
2	4	10
Total	40	100

No of visits by the patient to the doctor were zero in 22 cases i.e. in 55% cases, while it was one in 14 cases i.e. in 35% cases, and were 2 in 4 cases i.e. in 10% cases.

Table 8: Hospital delay.

Hospital delay	No of cases	Percentage (%)
Yes	2	5
No	38	95
Total	40	100

Hospital related delay was present in 5% i.e. in 2 cases, while it was not present in 95% i.e. in 38 cases.

DISCUSSION

In our study the age and sex of the patients did not have any co relation for the occurrence of delay in diagnosis. The maximum number of patients was in age group of 50-70 years and more in males than females (23%). However, there was no other study stating the relation between age, sex of the patients and occurrence of delay in diagnosis.

Our study finds no relation in stage of disease and delay in diagnosis. Most study showed no relationship between patient delay and stage of diagnosis.[4,5]

Another study shows no association between delay and tumour size and LN metastasis.[5]

The manner in which individual interpret the symptom has been shown to influence help seeking behavior, this amounts to delay due to symptom recognition. In our study- 87.5% patients showed delay due to symptom recognition i.e. the manner in which the patients interpretated their initial symptoms. Nineteen patients related their symptoms to upper respiratory tract infections and five patients attributed their symptom to benign swellings. In his study, Scott et al identified lack of knowledge about symptom of oral cancer as cause of delay.[6] Brouha et al found most patient attribute their laryngeal and laryngopharyngeal cancer to common cold or infection.[7]

In our study delay due psychological factors was found in 32.5% patients. This delay was attributed to patients giving history of fear of cancer, fear of cancer associated morbidity including surgical morbidity, fear related to ultimate outcome i.e. death due to cancer. In the study by Smith, fear of cancer and fear of embarrassment as key factor to delay in patient presentation.[8]

In our study socio-demographic factors were associated in delay in diagnosis in 45% patients. 12 patients gave reason of financial problem, 2 patients gave history of lack of family support while 1 patient cited old age to be the cause of delay. Most study show association between socioeconomic status and patient delay.[1,4] However Brouha et al, found no association between marital status, living situation (alone or with family), education or income, and patient delay for oral or pharyngeal cancer.[7]

Doctor's delay is defined as the time between initial visit of patient to primary care doctor and referral to the specialist. In our study - 55% patient directly came to tertiary care centre, 35% patients were referred in first visit, 10% were delayed due to practioner related factors i.e. 4 patients were delayed due to doctor related factor, out of which 3 patient lost their vital time in arranging money just for purpose of investigative modalities and diagnosis was delayed. While in 1 patient symptom was not recognised in time by practioner. According to the study by onizawa, in the delay of diagnosis of cancer there is an important role of the initial professional, particularly the dentist for oral squamous cell lesions.[4]

In our study, two patients were delayed due to hospital factors as one was combined kochs and malignancy who was under treatment of chest physician. Other was delayed as repeated biopsy was required for getting diagnosed as malignancy. There was delay due to hospital factors in 5% of patients in our study.

The delay in diagnosis of cancer in our study was found as under

Delay due to psychological and behavioural 32.5%, delay due to symptom recognition 87.5%, delay due to socio demographic 45%, practioner delay-10%, hospital delay-5%.

ACKNOWLEDGMENTS

Measures must be taken to reduce the factors causing delay in diagnosis.

Fear and anxiety about ultimate outcome of cancer should be allayed through various media & stress should be laid on fact that early detection can alter outcome of cancer so as to induce the patient to seek medical help early.

Screening programmes and camps must be taken by the concerned administrative authorities for early symptom recognition.

Facilities for diagnosis of cancer should be available at accessible centre and only treatment should be left to certain specialized centers. Accessible centers primary care practioners must be trained for early referral to specialized centers.

Limitations

Ours is a hospital based study not population based study.

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