The awareness and perception of Cancer Related Fatigue as a diagnosis tool– An Observational Study

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Abstract

Introduction: Fatigue is a highly prevalent condition among cancer patients. Although most cancer patients report that fatigue is a major obstacle to maintaining normal daily activities and quality of life, it is seldom assessed and treated in clinical practice. Few studies have explored its epidemiology, possible etiologies, or management. Cancer-related fatigue, which recently was accepted as a diagnosis in the International Classification of Diseases 10th Revision-Clinical Modification, reduces physical, psychological, and social functioning and results in significant distress for patients and caregivers. Adequate evaluation of fatigue must do more than simply assess severity. Although additional research is needed to further identify the causes and corresponding treatment of fatigue, practitioners should routinely assess and treat patients who may benefit from currently identified interventions, because fatigue can profoundly undermine the quality of life of patients with cancer. The purpose of the study was to measure the physiotherapist’s awareness and perception about the Cancer Related Fatigue (CRF).

Methods: One hundred (21UG & 79 PG qualified) Physiotherapist from all over Karnataka are randomly selected and interviewed by open ended questionnaire method contains ten questions which explains the prevalence, cause and functional assessment of cancer patients.

Results: The results shows that fifty five percentage of physiotherapist had no idea about the functional outcome measures of cancer related fatigue. Eighty percentage of physiotherapist had sound knowledge about the cause and related cause of CRF. But sixty eight percentage of physiotherapist were not agreed CRF as a diagnosis.

Conclusion: Even though Physiotherapist had sound knowledge about the cause and related cause of CRF, the awareness of functional outcome of Cancer Related Fatigue need to be improved.

Key words: CRF, Fatigue, Cancer, asthenia, Fatigue scale

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Introduction: Cancer-related fatigue (CRF) has been defined as a distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion related to cancer and/or cancer treatment that is not proportional to recent activity and interferes with usual functioning. Fatigue is a subjective experience and patient self-reports is the gold-standard method for assessing CRF. A number of measures have been developed to assess fatigue in the cancer context, which vary from single-item assessments of fatigue severity to multi-dimensional scales assessing different components of fatigue¹. In 1998, formal diagnostic criteria were proposed
to define a clinical syndrome of cancer-related fatigue. One of the advantages of the criteria is that they specifically ask patients whether the fatigue they are experiencing is a consequence of cancer or cancer therapy. In addition, the criteria attempt to distinguish CRF from fatigue that occurs secondary to depression. Cancer-related fatigue, which recently was accepted as a diagnosis in the International Classification of Diseases 10th Revision—Clinical Modification, reduces physical, psychological, and social functioning and results in significant distress for patients and caregivers. The possibility that inflammatory processes may be involved in the etiology of cancer-related fatigue draws from basic research on neural-immune signaling. This body of work has demonstrated that peripheral inflammatory cytokines can signal the central nervous system to generate symptoms of fatigue and other behavioral changes via alterations in neural processes. Preliminary reports suggest that alterations in the autonomic nervous system may also be relevant for cancer-related fatigue. In a study of breast cancer survivors, fatigue was associated with elevated levels of norepinephrine (indicating increased sympathetic activity) and lower heart rate variability (indicating reduced parasympathetic activity), both at rest and in response to a psychological challenge. In general, sympathetic nervous system activity is associated with increased inflammatory activity, whereas parasympathetic nervous system activity is associated with reduced inflammatory activity. Depression is of particular interest as a risk factor for cancer-related fatigue, as fatigue and depression are strongly correlated in cancer populations. Studies conducted with breast and prostate cancer patients undergoing radiation therapy have shown that pre-treatment sleep disturbance is associated with higher levels of fatigue before, during, and for up to 6 months after treatment completion. Physical inactivity is correlated with cancer-related fatigue; patients who are more fatigued typically report lower levels of physical activity. Lack of physical activity may lead to physical deconditioning, which makes everyday tasks more challenging and potentially contributes to the development and persistence of fatigue. Indeed, cancer survivors with post-treatment fatigue show decreased cardiorespiratory fitness. There are a large and growing number of randomized controlled trials of exercise as a treatment for cancer-related fatigue. One recent meta-analysis of this literature identified 56 randomized controlled trials that investigated the effects of exercise on cancer-related fatigue. Guidelines from the American College of Sports Medicine (ACSM) recommend that cancer patients and survivors engage in at least 150 minutes of moderate intensity aerobic activity each week. ACSM guidelines further recommend that exercise should be tailored to the individual cancer survivor to account for exercise tolerance and specific diagnosis, and that patients be closely monitored to safely progress exercise intensity and avoid injury. A recent trial of dexamethasone for patients with advanced stage cancer who reported moderate to severe symptoms of cancer-related fatigue showed significant improvements in fatigue and quality of life. The hematopoietic growth factor trials were all conducted with anaemic patients, the majority of whom were undergoing chemotherapy. In general, treatment with hematopoietic agents led to improvements in fatigue caused by chemotherapy-induced anaemia.

Methods: The purpose of the study was to measure the physiotherapist’s awareness and perception about the Cancer Related Fatigue (CRF). The main problems of cancer survivor patients are pain, fatigue, depression. Fatigue is the common problem during and after cancer treatments which is the challenging one for physiotherapist to set exercise regimen for the cancer patients. So it is important for Physiotherapist to know about CRF, as Physiotherapist plays important role in cancer rehabilitation team. In the academic aspects, recently oncology specialization is available in Physiotherapy master studies in India. This study included One hundred (21UG & 79 PG qualified) Physiotherapist from all over Karnataka are randomly selected and interviewed by open ended questionnaire method contains ten questions which explains the prevalence, cause and functional assessment of cancer patients. All the physiotherapist participated in the study have been explained and agreed to participate this study. The years of experience of the physiotherapist was not considered in this study.

Results: The results shows that CRF as a diagnosis not accepted by 68% of PT’s, CRF link with lethargy accepted by 81%. CRF related with insomnia accepted by 84%, CRF prevalent accepted by 86%, CRF caused by anaemia accepted by 80%, CRF caused by lack of exercises accepted by 87%, CRF caused by opioids accepted by 78%. CRF relate with anxiety accepted by 83%, Piper fatigue self-report scale no idea in 46% PT’s and 55% PT’s were not aware on functional assessment of cancer therapy (Table 1).
Discussion: Patient reports suggest that cancer-related fatigue is more severe, more persistent, and more debilitating than “normal” fatigue caused by lack of sleep or overexertion and is not relieved by adequate sleep or rest\(^1\). Indeed, studies have confirmed that the intensity and duration of fatigue experienced by cancer patients and survivors is significantly greater than healthy controls and causes greater impairment in quality of life\(^17\),\(^18\). Cancer-related fatigue is multi-dimensional and may have physical, mental, and emotional manifestations including generalized weakness, diminished concentration or attention, decreased motivation or interest to engage in usual activities, and emotional lability\(^19\). Studies of long-term cancer survivors suggest that approximately one-quarter to one-third experience persistent fatigue for up to 10 years after cancer diagnosis\(^20\). Fatigue has a negative impact on work, social relationships, mood, and daily activities and causes significant impairment in overall quality of life during and after treatment\(^21\). Fatigue may also be a predictor of shorter survival\(^22\),\(^23\).

Table 1: Open ended questionnaire

<table>
<thead>
<tr>
<th>S.No</th>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
<th>No idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Is CRF considered as a diagnosis?</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Is CRF linked with lethargy and asthenia?</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Is CRF related with insomnia or hypersomnia?</td>
<td>84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Is CRF most prevalent after cancer specific treatments?</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Is CRF caused by anaemia and dehydration?</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Is CRF caused by immobility or lack of exercises?</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Can the usage of centrally acting drugs (Opioids) by cancer patients’ cause of CRF?</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Is CRF related with anxiety &amp; depressive disorders?</td>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Are you aware of Piper fatigue self-report scale?</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Are you aware of functional assessment of cancer therapy?</td>
<td>55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion: Even though Physiotherapist had sound knowledge about the cause and related cause of CRF, the awareness of functional outcome of Cancer Related Fatigue need to be improved. And also CRF is a diagnosis for cancer survivor which reduces physical, psychological, and social functioning and Physiotherapist role is much more required.

Future recommendation: As this is just a preliminary study to assess PT’s awareness about CRF, this will not reflect the awareness of the total PT’s population. The study recommends that PT’s should have the complete knowledge about CRF.

References