

Challenge of Depression in Patients Suffering from Cancer and its Management

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ABSTRACT: Diagnosis of cancer in patients impact their lives in many ways, from the way of their thinking to the way of their living, it almost changes everything. Despite from the disease (cancer) deteriorating their physical health, the mental trauma that the patient gets, also become a part of it, as this diagnosis not just diagnose cancer in the patients, but also make patients depressed, anxious and worried about this. Psychiatric disorders like delirium, depression, anxiety etc. are found comparatively higher among those patients suffering from advance stages cancer, when compared to those suffering from early cancer stages. Factors like lifestyle issues, substance use, or past history/family history of any kind of depression, increases the risk of developing depression in cancer patients, which contributes in increased rate of mortality in them. This depression can also be associated with levels of pain or type of medical treatment that the patient is getting for cancer. Antidepressant treatment drugs like selective serotonin reuptake inhibitors (SSRIs), and methylphenidate have been found helpful in improvement of depression in patients of cancer when given as adjuvant treatments. Selection of appropriate antidepressant treatment is also suggested due to drug interaction that can be caused with chemotherapeutic drugs and interfere with the chemotherapy. The main challenge is to diagnose the severity of depression in severely depressed patients, due to which underestimation of the disease symptoms may result in poor treatment of the patients.

Keywords: Psychiatric disorders, chemotherapy, malignant, depression, psychoeducation.

INTRODUCTION

Generally, in most of the patients suffering from cancerous diseases, it is very common to see them in depression due to various factors like their disease, its condition, its treatments, lifestyles that they live during the course of their treatments, along with many other factors. Depression in patients suffering from cancer is generally underdiagnosed mainly when it is about the patients suffering from major depressive symptoms, and makes it difficult to provide them with appropriate treatments.

Psychiatric disorders like delirium, depression, anxiety etc. are very much common in patients suffering from cancer and found comparatively higher among those suffering from advanced stages of cancer. Depressive disorders can include persistent depressive disorders, major depressive disorders, adjustment disorder, dysthymia, etc. These disorders affect patient's life quality on a large extent. Medications like aromatase inhibitors, chemotherapeutic agents such as vinblastine, prednisone, tamoxifen etc. can cause depression in cancer patients. Although, depression does not develop in all patients, however, along with the adverse effect of

chemotherapeutic medications, there are some additional factors that can increase the risk of developing depression in patients during cancer treatment that include past history or family history of depression, lifestyle issues, substance use etc. (Venkataramu *et al.*, 2022).

Diagnosis of cancer in patients causes considerable psychological and emotional distress. Due to cancer being a life-threatening diagnosis, it is very common for patients to develop depression in response (Mishel *et al.*, 1984; Smith 2015).

Along with mental suffering caused by depression that can be of extreme intensity in nature, this situation also have a major impact on both morbidity and mortality (Hopko *et al.*, 2008; Spiegel and Giese-Davis 2003).

Euthanasia and suicides assisted by the physicians have been emerged as some of the medically and socially important issues worldwide. Due to this, the interest of cancer patients, who are suffering from high level of depression, has been increased in suicidal ideation or the request for an early death in cancer (Sullivan *et al.*, 2000; Kissane *et al.*, 1998; Akechi *et al.*, 1999; Chin *et al.*, 1999).

Depression in Cancer Patients. It was suggested in a literature that, patients with cancer suffers more from depression than the general population (Van'tSpijker *et al.*, 1997). Grassi and Rosti (1999), observed that 15% out of 201 cancer patients were met with the criteria suggestive of major depressive disorder (Grassi and Rosti 1999).

Depression contributes in higher rate of mortality in cancer patients (Colleoni *et al.*, 2000; Pinquart and Duberstein 2010). During a meta-analysis, it was found that depression (being it major or minor) contributes to an increase in the mortality rate by 39% (Satin *et al.*, 2009). A study reported that the patients with history of depressive symptoms are at a higher risk (around 2.6 times) of mortality from cancer within the first nineteen months after diagnosis of their cancers (Stommel *et al.*, 2002). Above data is really concerning with regards to the raising numbers of cancer patients suffering from depression, as depression also negatively affects their lives, along with the cancer they are suffering from.

More than 70% of the oncologists and more than 80% of cancer patients believe that mood affects the cancer progression (Lemon *et al.*, 2004).

Type of the chemotherapeutic treatment that the cancer patients are put on, can also remarkably affect the possibility of developing depression in those patients. For example, cytokines such as interleukin-2 (IL-2) or interferon-2 (IFN-2), which are used for the treatment of several malignant tumors, are well known for developing some depressive symptoms in the cancer patients (Capuron *et al.*, 2001). Addition of concurrent antidepressant medications as adjuvant treatment helps patients to manage depression, as antidepressant drug have been found to be effective for depression in cancer patients as well.

Depression complicates adherence with the medical treatment of cancer in patients. It also affects endocrine and immune functions that perhaps affects body's resistance towards the progression of cancer (Spiegel and Giese-Davis 2003).

Bukberg *et al.* (1984), observed that greater measured physical disability by the Karnofsky Rating Scale (where lower score, indicates greater disability) was associated with depression in a study of 62 patients hospitalized with cancer (Bukberg *et al.*, 1984).

Symptoms. Symptoms may include sleeplessness, anxiety, irritation, loss of concentration, and sometimes, symptoms like suicidal thoughts may also occur in severe cases (Bottomley, 1998). Some patients reported that life becomes meaningless, and they experienced feelings of misery and hopelessness (Hughes, 1985).

When physicians make their understanding of symptoms of depression in their patients based on the ratings of their patients, which are global in nature (mainly correlated with pain, anxiety, and global dysfunction), there is a very high tendency to underestimate the exact level of depression in majority of majorly depressed patients. This assessment can provide improved results if this can include more parameters like anhedonia, guilt, suicidal thinking, and hopelessness (Passik *et al.*, 1998).

Association with pain. Occurrence of depressive symptoms in patients suffering from high levels of pain is significantly higher when compared with the patients suffering from low levels of pain. In a study, it was observed that depression occurred in 33% of the patients with high amounts of pain, compared to 13% that occurred in patients with low levels of pain that suggested pain may be a causative factor of depression (Spiegel *et al.*, 1994).

TREATMENT OPTIONS FOR MANAGEMENT OF DEPRESSION IN CANCER PATIENTS SUFFERING FROM DEPRESSION

Pharmacological management. Antidepressants have been found more effective than placebo, which has been evident in studies, in management of depressive disorder in patients with depressive disorder related to cancer (Caruso *et al.*, 2013; Thekdi *et al.*, 2015; Grassi *et al.*, 2014).

Since a number of studies have observed that depression is very common in patients that are suffering from cancerous diseases, and may contribute in increased risks of disease progression or mortality, it becomes necessary sometimes to administer the patients with a corrective treatment, so that these risk factors can be avoided. Antidepressant therapy becomes more necessary if the patient is suffering from moderate to severe condition of depression. Consideration of patient's psychiatric symptoms in oncology has become an important aspect, hence Psycho-oncology is considered as a better treatment prospective for the cancer patients. With the advancement of psychopharmacology, newer and better tolerated drugs with lesser side effect profile are available nowadays (Venkataramu *et al.*, 2022).

Along with adjuvant therapy of antidepressants in cancer patients, effectiveness of their chemotherapeutic medications must also be kept in consideration. Selection of antidepressant medications must be done very carefully, considering the common side effects of chemotherapeutic drugs (such as nausea, diarrhea etc.), and to avoid any reduction in the effectiveness of chemotherapeutic drugs (Smith, 2015).

Treatment of depression in patients suffering from metastatic breast cancer, and improvement of their depressive symptoms within the first year of treatment, increases median survival time significantly by more than 2 years, when compared with the patients that experience increase in their depressive symptoms during that period of time (Giese-Davis *et al.*, 2011).

Mainly tricyclic antidepressants (TCAs) and SSRIs are the medication classes used to treat depression in cancer patients with depression (Ng *et al.*, 2011). Anticholinergic effects of TCAs can aggravate delirium associated with ongoing chemotherapy (Li *et al.*, 2012). In terminally ill cancer patients, conventional antidepressants may not be a best option due to their delayed mode of action (Li *et al.*, 2012; Norman 1999; Ng *et al.*, 2011).

It was observed in a trial that, within two days, methylphenidate provided moderate to marked improvement in the depression symptoms of more than

70% of the depressed cancer patients, that make this drug an effective alternative to conventional antidepressants (Olin and Masand 1996).

Along with depressive symptoms, antidepressants, as adjunctive treatment, sometimes also improves some other adverse symptoms related to the cancer treatments. In a double-blind trial, paroxetine, fluoxetine, and venlafaxine reduced hot flashes in cancer patients (Loprinzi *et al.*, 2000; Loprinzi *et al.*, 2002; Stearns *et al.*, 2000).

Non-pharmacological management. Non-pharmacological management such as psychoeducation, cognitive behavioral therapy, relaxation strategies, and problem solving approaches may benefit to patients suffering from mild to moderate depression due to cancer (Li *et al.*, 2012).

A positive relationship, understanding, and communication between patient and physician reduces the levels of distress in cancer patients (Boyes *et al.*, 2009). In a meta-analysis, it was observed that exercise may reduce pain and improve fatigue in cancer survivors (Craft *et al.*, 2012).

Meditation and progressive muscle relaxation, relieves mental and physical tensions in patients, which reduces their stress level, and have been observed to improve depression in cancer patients and their life quality (Sloman 2002; Barsevick *et al.*, 2002).

Scholten *et al.* (2001) observed in their study that only forty percent out of 43 female patients suffering from advanced breast carcinoma were willing to accept psychological counselling.

Klank-Rießen *et al.* (2007) observed in a study that 40.9 percent of 115 females suffering from breast carcinoma were interest in psychosocial counselling.

Curry *et al.* (2002) observed that only 22 percent of patients suffering from depression accepted, when offered any psychological help. Individuals with a moderate and high levels of depressive disorders were more likely to accept such offers.

Walters *et al.* (2008) observed that 42 percent of depressed patients preferred dealing with their depression on their own, and 47 percent of them preferred to get helped.

Consideration of drug interactions. Antidepressants and chemotherapeutic drugs may interact and cause nervous system toxicity or reduce the effect of chemotherapeutic drugs. SSRIs are concurrently prescribed in many patients suffering from breast cancer. Some SSRIs may interact with tamoxifen and reduce the metabolism of tamoxifen to its active metabolite, endoxifen, which can increased chances of breast cancer relapse (Caraci *et al.*, 2011; Borges *et al.*, 2006). Due to the very narrow range of anticancer drugs, it is necessary to avoid alteration in their mode of action. Hence, concurrent antidepressant drugs should be selected keeping this fact in consideration (Yap *et al.*, 2011).

CONCLUSIONS

It is evident that depression is very common in cancer patients, which causes anxiety, demotivate patient, cause sadness, develops suicidal thoughts (in severe

cases), and may also contribute in cancer progression or morbidity. There are some non-pharmacological methods that can be implemented for cancer patients suffering from mild depression, however, should not be relied upon for moderate to severe cases of depression in patients suffering from cancer. Antidepressant provides hope for patient to cope up with depression. It is also evident that antidepressant are also effective for depression in cancer patients who are suffering from depressive symptoms. However, there is no strong evidence that this adjuvant treatment with antidepressants increases the survival time of cancer patients, but antidepressants when used as adjuvant treatments, can definitely help in achieving a better quality of life in cancer patients.

FUTURE SCOPE

Further studies about depressive symptoms in patients suffering from cancer, their characteristics, and more effective antidepressant treatment them, will further enhance the quality of their lives.

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Conflict of Interest. None.

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