

EVALUATION OF PSYCHOTIC ILLNESS AND TREATMENT STATUS IN IMMUNOCOMPROMISED PATIENTS

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ABSTRACT

Immunocompromised patients mostly suffer from psychological disorders like stress, anxiety, delirium, neurosis, schizophrenia, depression, mania and dementia etc. Certain diseases leads to decline in immunity, like cancer, thalassemia and HIV patients are known to have compromised immunity. Psychological disturbances have been reported in immunocompromised patients, which may refer to as behavioral disturbances. The authors are aimed to assess the prevalence of psychotic illness in immunocompromised patients as well as the treatment they required. A survey was conducted among 70 immunocompromised patients by the help of questionnaire designed to judge the psychotic illness in immunocompromised patients. The

outcome result indicated that cancer, HIV and thalassemia patients required psychological support accompanied with the therapeutic treatment which they are receiving. Anxiety is one of the symptoms of psychosis and about 98% of the patients felt anxiety after being immunocompromised. There is less awareness about the need of anti-psychotic treatment in immunocompromised patients. These patients are deliberately fighting to live against the disease, so in order to give them a better quality of life; psychological support must be added to their treatment.

KEYWORDS: Psychotic illness, immunocompromised patients, antipsychotics, cancer, thalassemia.

INTRODUCTION

Immunocompromised patients are those which suffers from inactivation one of them ost important system that is "immunesystem" Cancer, HIV and thalassemia patients are immunocompromised and psychosis is observed in these patients who required a medical

attention, neurovegetative signs and symptoms may be helpful to diagnose depression or any physical illness in such patients. According to a study DSM-III diagnostic criteria is applied by 62 oncology inpatient, 42% met criteria for major depression, whereas 44% owned no depressed affect.^[1] The risk of suicide is found to be excess in cancer patients. Psychological care should be a basic and fundamental component of cancer treatment programs. These patients faces number of problem if we take a look towards children so as they don't even know about depression, but if adolescent patient girl suffer from cancer so she may develop cancer due to some social issues like marriage not only such reasons but all cancerous patients usually lose hope due to which they undergoes in depression.^[2] Corticosteroids are employed widely in the cancer treatment. In fact chemotherapy regimen includes the use of both corticosteroids and adrenocorticotrophic hormone (ACTH): for the treatment purpose of hematologic malignancies and also some solid tumors, ducortico steroids such patients faces number of problem like some adverse effects which may include neuropsychiatric complications, while deadly and life threatening steroids induced neuropsychiatric disturbances are uncommon, but some mild mental changes do occur frequently.^[3]

The administration of steroids in the patient with disease other than cancer is causing incidence of major mental disturbances which is reported to be in range of from 3%-50%. However critical psychotic reactions seem to occur in only about 5%. The range of disturbances includes mild to severe depression, mania, steroidal psychosis and dementedness.^[3] Within first two weeks of steroid treatment psychiatric disturbance usually occurs. Olanzapine, an antipsychotic medication is well tolerated and seems to be useful for corticosteroid therapy associated mood disturbances,^[4] Sorafenib (Nexavar), a multi-kinase inhibitor which target Raf kinase, vascular endothelial growth factor receptor (VEGFR) and platelet-derived growth factor as well, has shown auspicious results in the treatment of malignancies.^[5] is suspected to induce psychosis.

The efficacy evidence of usual and typical medication used for the depression treatment in cancer patients such as tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRI) is finite. Due to their late onset of action they may be possibly less suitable for this purpose. The use of psycho stimulants due to their rapid onset of action deserves more attention.^[6] The percentage for the Delirium occurrence in cancer patients is found to be 26% to 44% admitted to hospital. Above 80% of advanced cancer patients after a period of time experience delirium in their final days. Haloperidol is the most routinely used drug, and

new neuroleptics which include risperidone or olanzapine are being tested with favorable results. For hypoactive delirium Methylphenidate has been used.^[7]

Studies have found that cancer patients approximately 20%–40% ,suffer from sufficiently high levels of distress.^[8,9] But the aim of health care professionals is to minimize this psychological distress.^[8,10] Less than 10% of cancer patients have reported and have been referred for mental health services. Various treatments of psychiatric disorder and extreme anxiety (distress) include cognitive-behavioral therapy (CBT), problem-solving techniques, crisis intervention, group psychotherapy and adjuvant psychotherapy, which have been resulted to be effective in lowering the level of distress in cancer.^[8]

A low-dose sedating antidepressant, such as amitriptyline, mirtazapine, or trazodone may become beneficial for depressed patients. And antipsychotic, such as, risperidone (risperdal) olanzapine (Zyprexa), or quetiapine (Seroquel), in low doses may give benefit to anxious or mildly confused patients at bedtime. An intermittent use of Short- to medium-acting benzodiazepines or zolpidem (Ambien) acts as a good hypnotic in the absence of complex and problematic factors, like delirium.^[8] In immunocompromised patients, HIV and several opportunistic infections can severely affect the central nervous system (CNS). Thus, it is very important for health clinicians to know about the diagnosis and management of HIV-related medical and psychiatric complications.^[11]

In these patients, extrapyramidal symptoms develop by the use of antipsychotic agents. As tricyclic antidepressants produces anticholinergic effect therefore are not well tolerated by the patients with AIDS. However, new antidepressants which have significantly less adverse effects are found to be efficacious for several depressive episodes in patients with HIV. Caution should be given while prescribing benzodiazepines to patients with organic brain syndrome and HIV infection as they can produce confusion, amnesia, paradoxical reactions and lack of inhibition.^[12] Consideration should be given with psychological aid and psychiatric treatment while medical therapy of the patients with Beta-thalassemia.^[13] A major psychiatric disorder named oppositional defiant disorder (ODD) that occurs in thalassaemic pre-adolescent children guarantee Psychiatric intervention.^[14] According to a survey report heterozygous β -thalassaemia may be a possibility factor in mood disorders especially bipolar spectrum.^[15] There is a high risk of zinc deficiency in thalassaemic patients due to several causes that includes Desferal injection. In 10% patient zinc deficiency was found while some degree of depression was found in 52% patients.^[16]

The objective of the study is to evaluate the status regarding psychological problems associated with chronic illness and available rationale treatment options in tertiary care centres in view of the fact to identify obstructions in adequate utilization of treatment options.

METHODOLOGY

In order to find out, psychotic illness in immunocompromised patients, a survey was conducted. The aim of this study is to determine the prevalence of psychotic illness among immunocompromised patients. To conduct this survey, a questionnaire was designed that consisted of several questions. The survey was not only conducted in the general public but also in the hospitals. JPMC hospital and Abbasi Shaheed is the hospitals that were visited for the survey. The total sample size was 700 [table 1]. 400 forms were distributed in patients of the hospitals and 300 forms were distributed in the general public. After completing the Survey, data was collected and was converted in to graphs for statistical analysis to evaluate the result.

Table 1: sample size distribution

<i>Sample group</i>	<i>Total No</i>	<i>Total no of participants</i>
<i>Patients</i>	<i>400</i>	<i>700</i>
<i>General public</i>	<i>300</i>	

RESULT

Statistical analysis of Figure 1 shows that how much percent of patients are suffering from each immunocompromising disease like cancer, AIDS, chronic disorder and thalassemia, and we found that percentage of patients suffering from thalassemia was high i.e. 57% while the percentage of patients suffering from cancer was 42% and the percentage of patients suffering from AIDS and chronic disease was found to be 0%. Figure 2 reveals other types of chronic illness patients associated with the type of cancer. The different associated diseases of the patients included diabetes, pain, kidney problem, cardiac problem and cancer. The percentage of patients suffering from cancer was found to be highest i.e. 42%, with diabetes and cardiac disease the percentage was found to be 5%, with kidney disease and pain the percentage was found to be very low i.e. 2%.

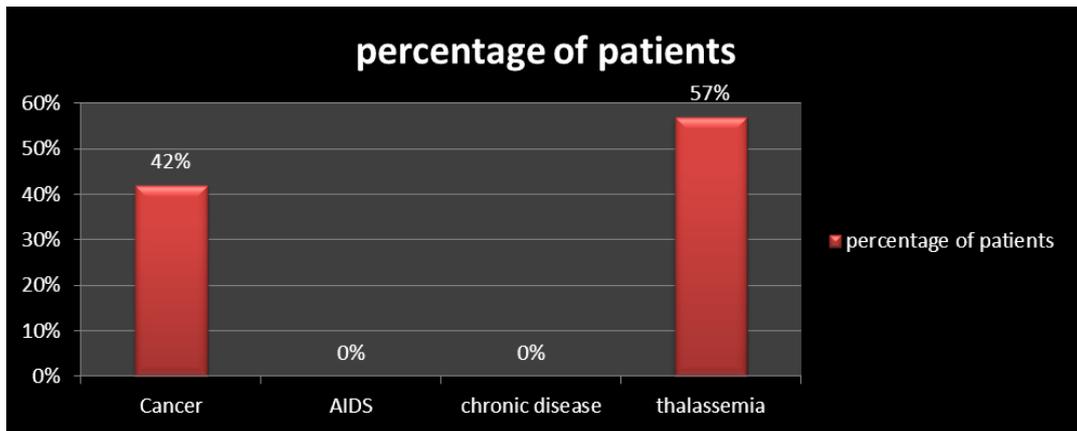


Figure. 1 shows percentage of immunocompromised patients with different chronic illness

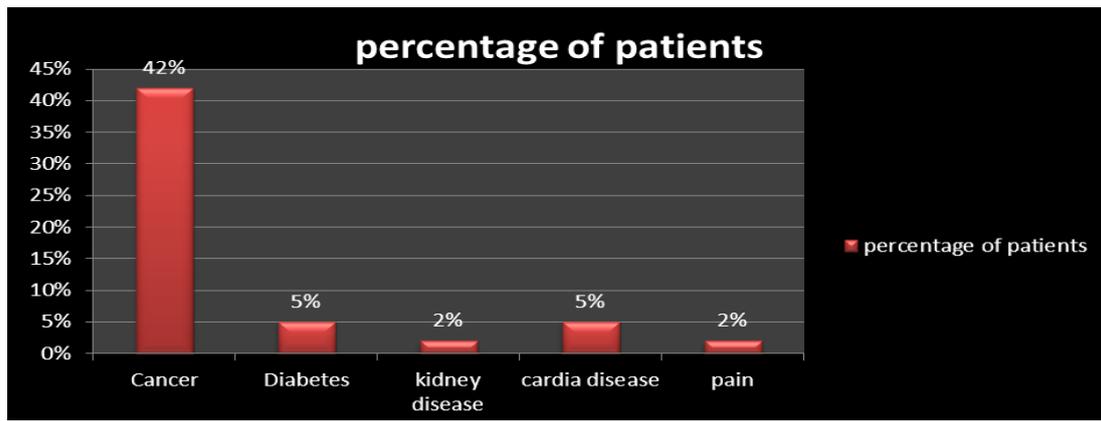


Figure. 2 percentage of other types of chronic illness patients

It is observed that out of 70% patients about 52% of patients are thalassemic patients and it is observed that it's duration is 15 years it may be due to that patients are receiving treatment that is then increasing their life span, But when 42% cancerous patients are observed the duration of disease is 2 years due to the reason that these patients are highly immune compromised. [Figure 3]. It is observed that during survey cancerous and thalassemic patients are widely suffering from psychotic illness about 75% patients are suffering from it. When 22% children are observed it is now cleared that they are not suffering from any psychotic disease due to age factor. [Figure 4]

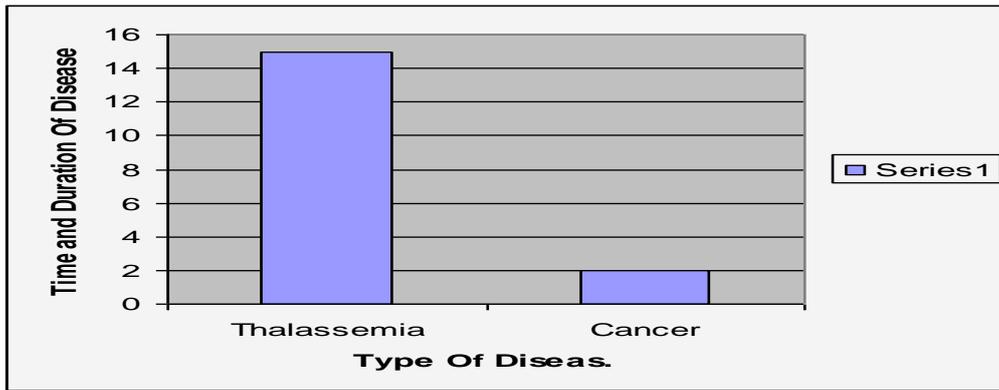


Figure 3 shows chronic disease with duration

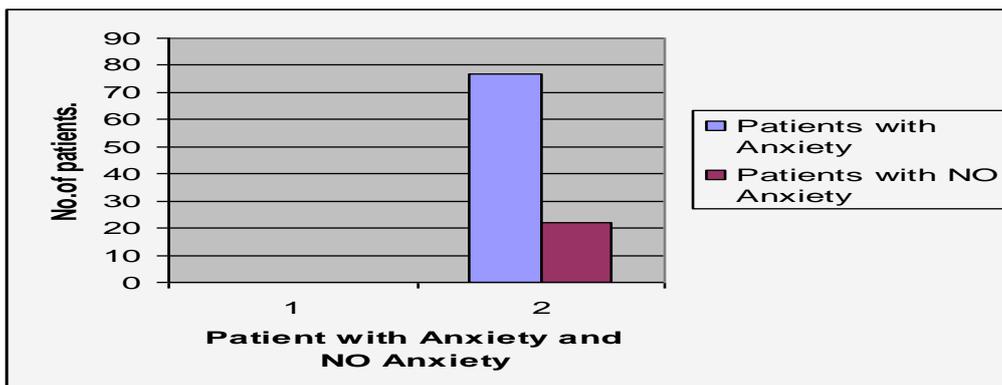


Figure 4 patient affected with anxiety after chronic illness

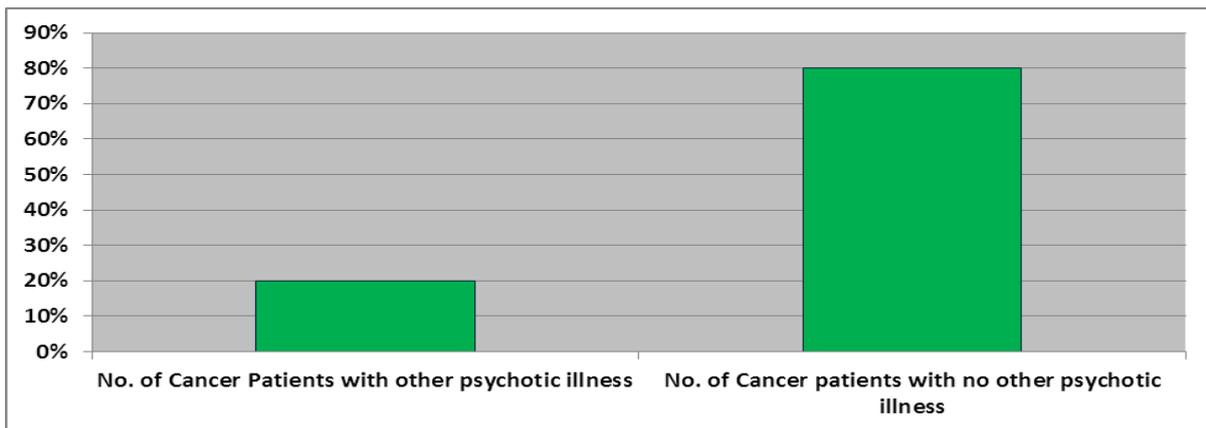


Figure 5 analysis of psychotic illness in cancer patients other than anxiety

This study shows that about 20% of patients thought to have psychotic illness other than anxiety and about 80% of patients thought that they don't have any other psychotic illness. Psychotic illness may include delirium, depression, confusion, hallucinations etc.[Figure 5] Figure 6 shows anxiety in 98% of immunocompromised patients after illness while 2% of the patients noticed their anxiety before illness. Occurrence of anxiety in

immunocompromised patients may be due their low immunity or as a result of drugs they use.

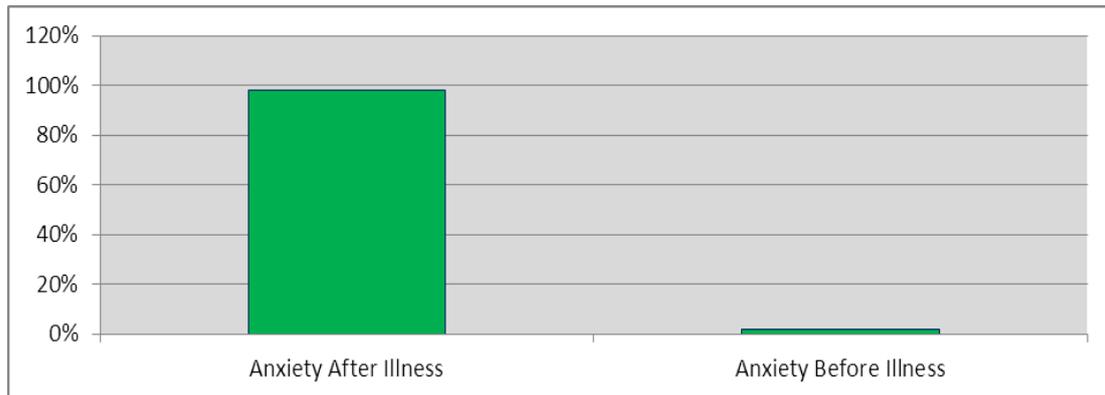


Figure 6 analysis of occurrence of anxiety

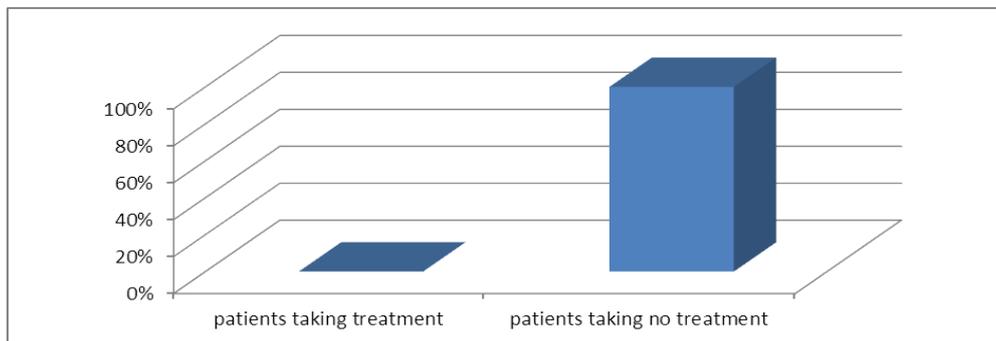


Figure. 7 analysis between patients receiving treatment or patients not receiving treatment

Figure 7 clearly demonstrate that No one is taking therapeutic treatment against psychosis except psychotherapy and counseling. So the patient has no awareness about any drug and not feeling that much better that a psychotic patient feels relaxed after taking antipsychotic rather than counseling. According to our research counseling is preferred rather than antipsychotics because they are already immunocompromised patients but Thalassemia centre is now introducing Risperidone due to its effectiveness, but it is not administered yet.

DISCUSSION

The immunocompromised group contains a large and diverse range of patients who have immune systems with different disorders. These include AIDS, primary immune deficiency, thalassemia, cancer, and patients who are immunocompromised from medical treatment such as chemotherapy or including organ or bone marrow transplantation. An imbalanced immune system has a great effect on patient’s mood. Thus; it leads to a variety of mood disorders

including obsessive-compulsive disorders, anxiety and depression. Several studies show a link between emotion and immunity. When patients are treated with immunosuppressive drugs, they undergo psychological changes. Anxiety is a feeling of fear, worry, and uneasiness, usually generalized and unfocused as an overreaction to a situation that is only subjectively seen as menacing. It is observed that anxiety or psychotic illness is commonly found in immunocompromised men and women. Anxiety may occur due to the number of reasons including anticancerous drugs like Vincristine and Vinblastine which are used as chemotherapy regimens or it may be due to early life experiences including (any traumatic agents).

Corticosteroids are also utilized widely in the treatment of cancer as chemotherapy regimen. It owns neuropsychiatric complications. In fact the incidence of major mental disturbances seems to be 3%-50% in patient on steroids whereas severe psychiatric reactions occur in only about 5%. Olanzapine is well tolerated antipsychotic drug appears to be useful for corticosteroid therapy mood disturbances. Similarly, Sorafenib (Nexavar) used in the treatment of malignancies is suspected to induce psychosis. Patients with advanced cancer, over 80% eventually experience delirium in their final days. Haloperidol, risperidone or olanzapine or methylphenidate is suggested for hypoactive delirium. According to studies, 20%–40% of cancer patients experience significant levels of distress and the treatment of this distress and psychiatric disorder include psychosocial interventions which include cognitive-behavioral therapy (CBT), crisis intervention, problem-solving techniques, supportive psychotherapy, and group psychotherapy, have been found to be effective in reducing distress in cancer. A low-dose sedating antidepressant are suggested to depressed patients, such as mirtazapine, amitriptyline, or trazodone. Patients with mild anxiety may get benefit from a low dose of an antipsychotic, such as olanzapine (Zyprexa), risperidone (risperdal), or quetiapine (Seroquel) at bedtime. Short to medium acting benzodiazepines can also be given for good hypnosis but in the absence of complicating factors, such as delirium. HIV, due to immune compromised patients can also affect the CNS. The some new antidepressants, with fewer and milder adverse effects, are safer and have proved that they are efficacious in the treatment of the depressive episodes which are often seen in HIV-infected patients. β -thalassaemia has a susceptibility factor in mood disorders, especially of the bipolar spectrum. Oppositional defiant disorder (ODD) is the major psychiatric disorders which are observed in thalassaemic pre-adolescent children warranting psychiatric intervention. Thus medical

therapy of the patients with Beta-thalassemia major should be accompanied with psychological aid and psychiatric treatment.

In our survey we have observed that 99% of people suffer with anxiety whereas only 1% of people are free of any anxiety disorders. This survey particularly declares that anxiety or psychotic illness is commonly found equally in both male and female. Males are highly immunocompromised due to which they suffer from anxiety much greater than females. In order to confirm that either psychotic illness is found in immunocompromised patients we have been gone through different hospitals like (Abbasi Shaheed Hospital, Cancer Hospital, Thalassemia Centre, and in Public place). About 57% patients of thalassemia and 42% of cancerous patients are covered in this survey. Furthermore it is also observed that people are also suffering with number of other disorders like diabetes and cardiac problem with 5% and minor, severe pain and kidney problems with 2%, with a greater extend of cancer including (uterine, ovarian, breast, lung cancer, lymphoma and leukemia). It is also observed that people with thalassemia have been suffering from birth or with a duration of 15 years or more, while people suffering from cancer have been suffering from it with a time duration of 2 years due to the reason that patient with different cancers are highly immunosuppressed and death occurs after 2 to 4 years depending upon the type of cancer. This assignment also clears that depression/ psychotic illness or anxiety occurs in immunosuppressed patients after illness with a ratio of 98%. While thalassemic child patients clears that they are not suffering from any psychotic illness and it is due to the age factor thus they does not require any treatment. Patients with psychotic illness also suffer with other psychological situations like (insomnia, bad behavior, and mood swings e.t.c). Whereas patients with age of above 20 greatly suffer with psychotic illness but they are not taking any treatment because counseling of such patients are preferred rather to take any antipsychotics. People with thalassemia are now in process of taking antipsychotics (the drug that is to be preferred is risperidone). In our study we found that there is not only one but a number of consequences responsible for psychotic illness. We found psychotic illness in immunocompromised patients. In many studies, cancer patients have been reported to have psychological illness like depression, delirium and anxiety. Similarly thalassemia and HIV infections are also responsible to affect the CNS of the patients due to their decreased level of immunity and loss of natural resistant power. The drug they use also leads to psychotic illness, like corticosteroids which are used commonly in the treatment of cancer, are said to possess neuropsychiatric complications. Other than this,

social issues or problems may also lead to anxiety but anxiety can easily dominate in an immunocompromised patient.

CONCLUSION

Psychosocial care of immunocompromised patients is a fundamental part of a quality patient care. It is important to monitor these patients for distress and recognize and manage psychosocial distress and other psychiatric disorders. Furthermore, more research work must be carried out to improve assessment and treatment of distress and psychiatric syndromes in the immune compromised patients and to promote patient counseling which is basic step towards their better health in the clinical practice.

Conflict of interest: Not yet Declared

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