Case Report

Management of Bipolar Disorder and Post-Traumatic Stress Disorder in a Patient During and Post Breast Cancer Treatment

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Abstract

Women with severe mental illness, e.g. bipolar disorder, have been shown to have higher incidence of breast cancer compared to the general population and show decreased overall survival compared to those without a mood disorder. Herein, a case is presented for the management of a woman with bipolar disorder diagnosed with breast cancer that exemplifies additional disparities individuals in the psychiatric community face. It is important to have frequent follow up with psychiatric practitioners and communication between these individuals and oncologists. This includes treatment optimization for not only mood but ensuring that there are no pharmacological interactions between psychiatric and oncology medications. This case also highlights the need to consider a diagnosis and treatment of post-traumatic stress disorder following a cancer diagnosis and subsequent management.

Keywords: Psycho-oncology; Bipolar Disorder; Post-Traumatic Stress Disorder; Breast Cancer

1. Case Presentation

A 40-year-old Hispanic female with a past psychiatric history of bipolar I disorder, generalized anxiety disorder, and attention-deficit hyperactivity disorder predominantly inattentive type found a solid mass in her right breast three years ago. Fine needle aspiration biopsy and cytology of the breast mass provided the patient with the diagnosis of stage IIb malignant invasive ductal carcinoma of the right breast (T2N1M0) with malignant metastasis to axillary lymph nodes. Upon further evaluation, the tumor biopsy was found to be positive for estrogen receptors (strong), progesterone receptors (moderate), and HER2/NEU equivocal. After the diagnosis, the patient then underwent a PET scan and it was found that there was abnormal fluorodeoxyglucose uptake in the right breast mass and affiliated lymph nodes in addition to abnormal uptake in the left ovary. It was at this time the patient was informed to meet with a psycho-oncologist to help manage psychiatric medications throughout the cancer treatment regimen. However, the patient was not given specific contact information for this kind of specialist because she had seen a psychiatrist in the past. Prior to her cancer diagnosis the patient was stable on Oxcarbazepine 150 mg twice a day, Clonazepam 1 mg as needed up to twice a day, Escitalopram 20 mg, and Lurasidone 20 mg once a day.

A few weeks after the cancer diagnosis, a port was placed in the left subclavian for administration of chemotherapeutic agents: Tamoxifen, Cyclophosphamide, and Doxyrubicin. It was during this time when that the patient needed psychiatric medication adjustments. The chemotherapy made her very ill, she felt cognitively slower from the medications, and felt that she could not regulate her mood but was able to maintain visits with her psychiatrist. Following chemotherapy, the patient then underwent a bilateral mastectomy with corresponding lymph node removal. Four months later, the patient then underwent a laparoscopic hysterectomy and bilateral salpingo-oophorectomy. Once the patient recovered from these procedures, she began radiation treatment. During this time the patient suffered from severe pain from the radiation which she was given nonsteroidal anti-inflammatory drugs (NSAID's). The pain, which was improperly managed per the patient, and patient described "bodily mutilation" from her procedures caused her to become psychiatrically unstable/depressed and suicidal. The patient again needed a psychiatric medication change to assist with the mood dysregulation and suicidal ideation. Her medication regimen at this time consisted of Alprazolam 1 mg three times a day as needed, Lurasidone 60 mg daily, Oxcarbazepine 300 mg in the morning and 600 mg in the evening, Quetiapine 50 mg at bedtime nightly.

Finally, when the patient was told that she was cancer free, she began treatment for bilateral breast reconstruction surgery. With this came immense pain as the patient not only had to have her skin stretched for implants to be placed but she also had to have scar tissue removed that was resultant from radiation on her right upper extremity. The scar tissue was so thick that it caused nerve damage to the patient's right arm and impeded circulation/drainage. Again, the patient was only provided NSAID's for her discomfort prior to and following the breast reconstruction and scare tissue removal procedures. The patient's pain was again dismissed and was subsequently treated via her psychiatrist. For her pain the patient was started on 400 mg Gabapentin at bedtime and 100 mg twice a day, and 10 mg Cyclobenzaprine 10 mg three times a day as needed for her pain. For management of her residual cognitive slowing secondary to chemotherapy the patient was started on Lisdexamfetamine Diesylate 70 mg daily. Finally, the

patient's mood was stabilized on Alprazolam 1 mg daily as needed, Bupropion XL 300 mg, Lurasidone 80 mg daily, and Oxcarbazepine 600 mg twice a day, which she has been stable on to date.

2. Background

Individuals diagnosed with mental health disorders have been shown to have a reduced life expectancy to those who do not suffer mental health disparities, specifically that mortality data for individuals diagnosed with bipolar disorder were comparable to heavy smokers [1]. Furthermore, suicide mortality in women diagnosed with bipolar disorder were ten times higher when compared with the general population [1]. It has also been found that women with bipolar disorder are more likely to rapid cycle, have increased episodes of mixed mania, and need special considerations in regard to their reproductive cycle (which includes pregnancy, perimenopause, and menopause) [2, 3]. For these reasons and more, management and treatment of bipolar disorder should be carefully monitored for best patient outcomes. In addition to having a lower life expectancy, individuals/women with bipolar disorder have a further decreased overall survival when diagnosed with cancer compared to those without a mood disorder [4]. The incidence of breast cancer is higher in women with severe mental illness (such as schizophrenia and bipolar disorder) when compared to the general population [5]. This is believed to be, in part, that individuals who suffer from mental health diagnoses are more likely to neglect screening, need a more integrative medical management upon cancer diagnosis, and physician bias against those with mental health disorders compared to the general public [5-8]. It was further found that cancer patients with severe mental health disorders were more likely to have metastasis at diagnosis from disparities in screening accessibility, decreased chance for specialized interventions (e.g. patients with breast cancer received less radiation and chemotherapy sessions), and saw a two fold increase in all-cause mortality hazard compared to patients without mental illness [9-12]. With breast cancer being more prevalent in individuals with severe mental illness there in theory should be more on treatment protocols for this population. However, data is relatively low, and studies are lacking. It has been shown that antipsychotic use with chemotherapy can worsen myelosuppression that normally occurs from chemotherapy [12]. It was also noted that medications such as Clomipramine, Duloxetine, Haloperidol, Paroxetine, Sertraline, and Fluoxetine can increase the effects, and side effects, of chemotherapy agents such as Tamoxifen, Docetaxel, Paclitaxel, and Cyclophosphamide [12]. This is of particular concern for patients with breast cancer as Tamoxifen is a common medication utilized in chemotherapy. Furthermore, Tamoxifen is metabolized by cytochrome P450 CYP2D6 to active metabolites so SSRIs that block CYP2D6 decrease the active form of the medication and can be linked to increase risk of breast cancer death [5]. Further treatment recommendations include avoiding common anti-emetics used in oncology (e.g. Metoclopramide) because of its dopamine agonist effects. When this is coupled with antipsychotics (dopamine antagonists) it can lead to acute movement disorders. As a result, it is recommended that cancer patients on these psychiatric medications should try Cyclizine and 5-HT3 antagonists for nausea and emesis [12].

One common treatment recommendation across the literature is a complementary/integrative medicine (CIM) treatment protocol that utilizes communication between oncologists, psychiatrists, psychologists/social workers, and primary care providers [6-8]. The importance of this cannot be understated as cancer patients with concomitant

mental health issues may become unstable throughout the process of diagnosis, treatment, and recover from cancer. It has been debated as to whether or not a patient who is diagnosed with cancer can receive a diagnosis of post-traumatic stress disorder (PTSD) or if it is adjustment disorder [13]. One study showed the prevalence of PTSD in cancer patients was 55% in patients who did not have the diagnosis prior to receiving their cancer diagnosis [14]. PTSD should not be ruled out as a working diagnosis for the patient, or close family members, as they have to deal with the fear of death/treatment resistant cancer, and bodily "mutilation" from procedures such as a mastectomy. Radiation, chemotherapy, and surgeries further come at a price by introducing chronic pain. While patients who suffer from mental health disorders have been shown to be a higher risk of opiate abuse potential [15], this should not deter medical practitioners from managing chronic pain appropriately. Last, following chemotherapy in many patients leads to cognitive deficits. This is colloquially referenced as "chemo-brain". It is important to for patients exhibiting cognitive deficits to also be assessed for fatigue and pain, as these can largely impact cognition and focus [16]. However, it has been shown for patients that suffer from "chemo-brain" Memory Attention Adaptation Training (MAAT), a type of cognitive behavioral therapy (CBT) for cognition improvement, increased the patient's quality of life and verbal memory performance [17]. Unfortunately, more studies are needed to be conducted on this therapy style and there are a limited number of practitioners who can administer this style of CBT.

3. Discussion and Recommendations

PTSD, chronic pain, and body mutilation coupled with a dysregulated mood lead to increased suicidal ideation (SI) in the patient presented in this case. The patient reported that the large amount of support from her psychiatric practitioner (who she had prior to her cancer diagnosis) and frequent meetings to adjust medications helped her manage her SI and mood dysregulation. It is important for cancer patients to have frequent interactions with their mental health providers and integrate care between the various specialist that they work with to increase patient outcomes. There needs to be a higher level of support from psychiatric practitioners, in addition to the social workers that usually manage cancer patient care. Moreover, there should be a higher level of communication from the psyco-oncology case coordinators and oncologists to individuals managing the psychiatric medications. One concern exhibited in this case are the cognitive issues that accompany chemotherapy. While this is difficult for anyone to manage, we believe that there should be a larger focus on this for individuals with bipolar disorder and ADHD. Following chemotherapy, the patient not only had issues with cognitive processing but also had difficulty with the ability to self sooth and appeared more emotionally reactive. This should be monitored for better quality of life outcomes post chemotherapy but also to help regulate and manage impulsivity that may arise, or be exacerbated, in those with bipolar disorder.

We believe that PTSD should also be considered a diagnosis in individuals, and potentially family members, affected with cancer rather than adjustment disorder. Following the cancer diagnosis, the patient stated that she has constant anxiety/hypervigilance related to her health and even feels mutilated when looking at her scars or thinking about her pain. Moreover, the patient stated that her children, following cancer treatment, have viewed her as "fragile" and do not let her do things alone. According to the DSM-V, the symptoms of adjustment disorder must

not persist for more than six months once the stressor has terminated [18]. However, individuals with cancer have lifelong fears, worries, hypervigilance, and reexperience things that they lived through in relation to their cancer diagnosis and treatment (e.g. worries about reoccurrence, lifestyle changes, body scars, etc). We believe that most of the patient's distress/symptoms persisted, thus, excluding it from the criteria for adjustment disorder. This is of concern when treatment options and time frames for treatments are assessed. While adjustment disorder is predominantly treated with brief psychotherapy and, if needed, adjuvant with selective serotonin reuptake inhibitors (SSRIs). PTSD on the other hand is managed with chronic trauma-based psychotherapy and concomitant SSRIs.

Consent and Conflicts of Interest

The patient provided verbal and written consent for her case to be published as long as all identifiable protected health information was removed. The authors have no conflicts of interest to report.

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