CLINICAL VIGNETTE

Cancer and Depression

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Case Report

A 52-year-old female with no significant past medical history came in for preoperative clearance exam for planned lumpectomy after recently being diagnosed with stage I invasive ductal cancer of the right breast. Her recent annual physical prompted the screening mammogram and subsequent ultrasound-guided core biopsy.

Since the diagnosis of the breast cancer, the patient has been unable to sleep and felt "overwhelmed" and depressed with her emotions. She lost 5-10 pounds due to poor appetite. She had taken a leave from work to deal with the cancer, with her lumpectomy scheduled in 1 week. She is occasionally tearful during conversations. She has told most of her family who have been encouraging and supportive. However, she has not discussed the diagnosis with her parents. She is otherwise healthy without chronic medical problems and has no family history of breast or ovarian cancer.

She is married with 2 children and works part time in retail sales. She does not smoke or drink alcohol.

On physical exam she appeared depressed. Her vital signs were normal and exam was unremarkable except for the recent needle biopsy.

Treatment Course

Patient was prescribed Lorazepam 0.5 mg to take on an as needed basis for bouts of extreme anxiety (with caution to not use on regular basis). After surgery, patient was pathologically staged with early stage T1c N0 invasive ductal cancer with favorable prognostic markers which did not mandate any chemotherapy. She was relieved with the pathology report, with improvement in anxiety and depression. She had not taken Lorazepam, and did not require further pharmacotherapy for her mood. She was referred to an oncology support group, she found extremely helpful, and was able to return to full time work 6 weeks following her surgery.

Discussion

With any cancer diagnosis, patients are frequently confronted with the choice of a variety of treatments. A meta-analysis of cancer patients found major depression prevalence of 16.3% with another 19.2% with minor depression or sub threshold depression.[1] The rate of depression in cancer patients is thought to be up to three times higher than in the general population.[2] There is also an elevated risk of suicide and cardiovascular events after cancer diagnosis reflecting the devastating effect of cancer diagnosis on mood.[3]

Depression can occur with any stage of cancer diagnosis. The somatic symptoms of depression can include but are not limited to fatigue, weight change, and even diminished cognition. The symptoms are often dismissed by treating physicians as symptoms of the cancer itself or side effects of cancer therapies. Risk factors for depression include lack of social support and prior history of depression. In some studies, depression is associated with shorter survival rates, partly due to non-compliance to medical therapy and reduced levels of self-care.[4] Depression may also increase sensations of pain[5] and possibly diminish the immune system,[6] an obvious concern for those on chemotherapy. The impact of depression can be profound.

Routine screening for depression in cancer patients is highly recommended. While depression can be assessed using the DSM-5 criteria, the U.S. Preventive Services Task Force recommends a straightforward two item screener for major depression that has been proven to be as effective as longer screening instruments.[7] A positive answer to either of the following two questions should prompt clinicians to perform a full diagnostic assessment of major depression.

> "Over the past 2 weeks, have you ever felt down, depressed, or hopeless?"
> "Over the past 2 weeks, have you felt little interest or pleasure in doing things?"

This simple two question screening test can lead to a diagnosis of depression with a positive predictive value of 57% and a negative predictive value of 98%.[8] Another screening instrument is the Hospital Anxiety and Depression Scale - Depression (HADS-D). This screening questionnaire has seven questions regarding depressive symptoms, each scored by the patient from 0-3. Scores of $\geq$8 are indicative of probable depression, while scores of $\geq$11 can be highly indicative of depression.[9]

Pharmacotherapy is an effective treatment for depression in cancer patients. Randomized trials have documented the effectiveness of antidepressants in cancer patients. Anxiolytics and hypnotics like benzodiazepines can also be used as

adjunctive treatment to diminish the effects of anxiety and sleep related issues. A meta-analysis found no recommendation for one antidepressant type over another in cancer.[10] Proper pain control is also important. One study found that depression occurred in 33% of those with high levels of pain, compared versus 13% in those with low levels of pain.[11]

In addition, patients can benefit from psychotherapy, including relaxation strategies, psychoeducation, cognitive behavioral therapy, problem solving therapy and acceptance and commitment therapy. One meta-analysis concluded also that exercise may lower pain and improve fatigue and quality of life among cancer survivors.[12]

Conclusions

Depression is a common finding among cancer patients and can manifest substantial symptoms affecting both the patient and family. Clinicians should routinely screen cancer patients for depression and provide for appropriate pharmacotherapy and psychotherapy.

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