

Depression in cancer surgery

Mousavi SR^{1,2}, Mousavi SM³, Mehdikhah Z⁴

Abstract

Depression is common in today world and this article seeks to address issues related to depression in cancer surgery. Surgical situations and their effects on patients, as well as depression in the family and the surgeon are highlighted

Keywords: depression, cancer, surgery

1. Professor of Surgical Oncology, Shahid Beheshti University (MC)
2. Cancer Research Center, Shahid Beheshti University (MC)
3. MSc of Clinical Psychology, Islamic Azad University of Tehran
4. Shahid Beheshti University (MC), Mofid Pediatrics Hospital

Corresponding Author:
Seyed Reza Mousavi MD
E-mail: Seyed29@yahoo.com

IJCP 2008; 2: 83-86

Introduction

Depression in cancer patients in general is common and occurs throughout the course of their cancer illness[1;2]. A recent study from Japan reported the prevalence of depression in 223 patients who were successfully treated for non-small cell lung carcinoma [3] over a 3-month period, 14.8% had major or minor depression. The prevalence of depression was 9.0% at 1 month, 9.4% at 2 months, and 5.8% at 3 months. The researchers noted that 6.3% of the patients had a history of major depression prior to their lung cancer diagnosis. They found that satisfaction with confidants, pain, and performance status were significantly associated with depression at 3 months.

Early recognition and intervention of depression may play an important role for non-small cell lung carcinoma patients after successful treatment. Social support, especially from family members, is critical. In recent studies, depression and depressive coping with lung carcinoma were significantly associated with a shorter survival, independent of the influence of biomedical prognostic factors[4].

The 21st century is often termed as Age of Depression so the need arises to especially address issues related to depression in clinical practice. Moreover, health care providers themselves are susceptible as well. The present article dwells on the issues related to depression in cancer patients who undergo surgery, their family members and the surgeon himself.

Depression in patients undergoing cancer surgery

The obvious reaction in any person informed of the need for a surgical procedure for cancer is anxiety. The term "Surgery" may evoke the idea of a threat to life as in amputation, loss of voice as in larynx cancer surgery, disfigurement as with mastectomy or uncertainty in coping up with the challenges of survival and disability following oncosurgery. Other psychological factors such as neurosis, stress and depression which cause psychiatric co-morbidity in an already disease stricken patient may interplay and add to the anxiety. The Cincinnati series reports a 4.5% incidence of depressive reactions in surgical patients, only second to delirium[5;6].

The diseased patient may become non-cooperative by showing distinct lack of interest in his treatment which may complicate the surgeon's problems and impede his own recovery. The depressive reactions may be accompanied by physiological changes as well as functional and psychological symptoms. Moore et al demonstrated the effects of emotion on the Hypothalamo-Pituitary - Adrenal Axis (tachycardia, prolonged ileus, etc.) during immediate and subsequent post operative periods which can interfere with the clinical assessment of a surgical patient[7].

The factors which modify the degree of depression in a surgical patient are manifold. Depression is seen to be more common in older age group which is attributed to the blunted ability to cope up with a surgical insult. The prevalence rate is almost double in females compared to males which; is related to the

increase in physiological stress and presence of gynaecological cancers in females. Emotional strength and endurance of the patient are also important contributory factors.

Lack of financial support causes and aggravates depression in the lower socio-economic class. Losing occupational skills due to limb loss in a limb sarcoma or voice problems in laryngeal cancer surgery in a professional singer may cause depression. A patient in a public hospital is more prone to depression than a patient in a private hospital. This may be related to financial problems, surgical environment, lack of rapport with the operating surgeon and having little or no say in choosing the surgeon.

Prolonged nature of the illness as in breast cancer after mastectomy during or after chemo-radiation may precipitate depression. It may be interesting to note that the only specific tumor outside the nervous system which may present as depression is the cancer of the pancreas[8]. The pancreatic neuropeptides have been incriminated as mediators in these patients. Others include tumors of the Pituitary, Parathyroids and those seen in Paraneoplastic syndromes. Patients with depression often become nicotine and alcohol dependant which may aggravate pre-existing illnesses as chronic pancreatitis and peripheral vascular diseases the nature of the surgery, the chance of its success and the trust of the patient in the operating surgeon have tremendous effects on the nature and course of depression.

Surgical situations and their effects on patients

Listed below are various surgical situations having different effects on patients.

Oncosurgery

It has been seen that cancer virtually disrupts every aspect of the patient's life. Depression is further compounded by the chronic nature of the illness, its treatment, pain, generalized lassitude and anorexia and the thought of death. Buckberg found a direct relationship between depression and level of physical disability in cancer[9]. The combination of the surgical procedure and the awareness of the implications of the illness test the emotional stability of the patient. Depression is a response that stems from loss of health and physical integrity resulting from disease, disfigurement and discomfort, financial problems resulting from cost of treatment and loss of

job, rejection by friends and loved ones including separation to receive treatment.

Sutherland and his associates are of the opinion that loss of a bodily part or valued activity or function is more depressing than fear or expectation of death[10]. This is most commonly seen in surgeries performed for malignancies of the head and neck region and for breast cancer. Maguire series reports a 20% incidence of depression following mastectomy related to appearance and sexual dysfunction [11;12]. Since head and neck malignancies are highly related to abuse of alcohol and tobacco, these patients suffer increased anxiety related to substance withdrawal as well as pain and depression related to feelings of guilt. In a patient with colostomy, depression occurs from sexual and social disability.

Free and open communication between the patient and the surgeon helps with overcoming the patient's fear for the disease and his emotional and mental difficulties. A healthy relationship is fostered by trust on part of the patient and interest on part of the surgeon. Since biological behavior of cancer differs in different patients, rigid prognostification of the disease should be avoided as far as possible.

Psychological support and education are necessary in order to alleviate the patients' depression and fear to deal with disability resulting from the disease or the therapy. Examples include training in case of a colostomy by an enterostomal therapist. Patients who require ostomies like a colostomy or ileostomy should be visited preoperatively by a stomal therapist and a member of the ostomy club who can share the feelings and concern of the patient. Patients with breast cancer treated by mastectomy may be helped to alleviate the problems of altered body image by referring to rehabilitation clinics. An important point especially in breast cancer and gynaecological surgery is that patient's spouse should be included as an active participant in all the discussions of the disease and treatment.

Laryngectomy patients can similarly be helped by speech therapists and patients' clubs. Patients recovering from amputations may benefit from meeting recovered amputees and physiotherapists before and after treatment.

Some incurable patients are unable to accept the realities of the situation. It hence becomes essential that a responsible family member be informed. The

basic aim of a surgeon in caring for a patient inflicted with advanced cancer is to 'prolong useful life and not useless suffering'. The patient should be permitted to die with dignity when active therapy can no longer be of benefit.

Neurosurgery

Depression in a neurosurgical patient may be attributed to physical incapacitation, temporal lobe lesions or prolonged use of steroids.

Paediatric Surgery

In pediatric practice depression is more commonly seen in parents than in children. The prevalence of depression related to cancer death in children is low because the concept of death as a permanent biological process usually does not develop until the age of nine. However, post surgical depression in children may manifest as irritability, excessive clinging to parents, rebellious behavior and school phobia.

Genitourinary Surgery

Genitourinary cancer surgery is often associated with depression arising from sexual dysfunction. One indicator of adjustment, sexual functioning, gives an idea of the magnitude of the problem. Comparative studies are few, but the effect on sexuality is surprisingly similar in different cancers such as Hodgkin's disease and cancers of the testis[13] and those of lung and prostate[14]. These studies showed that one fourth of patients with Hodgkin's disease and cancers of the testis and a third of patients with cancers of lung and prostate felt that they had become less attractive to their partners, and a similar proportion found that their sex drive was diminished.

Depression in the family

Three situations are commonly encountered in the practice of oncology or in the management of terminal diseases; families who do not want their patients to know the diagnosis and outcome, the family wants the patient to be left alone but the patient wants to keep fighting and lastly the patient wants to be left alone to die with dignity but the family do not give up. These problems must be approached conjointly. It is an unpleasant task for surgeons but preferable to being summoned to court. Surgeons should maintain an honest relationship and maximize the patients' trust. The patient's family members may feel supported when the surgeon acknowledges the spiritual dimensions and mentions practical components of loss.

The family is the second facet in the triad of depression. Surgery is a burden for family members and may have immediate and or longstanding effects on the function of the family. Stress in family members is the key factor in the development of depression. Depression stems from the concern for the patient's well-being and financial losses arising from illness. It may develop as early as the time of diagnosis and may be aggravated by exhaustion of resources towards investigative procedures and subsequent treatments. A study by Northhouse and Swain suggested that the level of stress experienced by family members is compatible with that of the patients[15]. Plumb and Holland reported that patients and the next of kin were indistinguishable in terms of level of depression[16]. Parental reaction to surgery on the child especially in a major surgery resembles that of grief after the death of a close and a loved one. This may persist as depression when the child gets better. These events may have destructive effects on the relationship between children and parents in the future course of the child's normal life. Prolonged nature of the illness as in burns or a prolonged convalescence associated with orthopaedic and trauma surgery may also precipitate depression.

Conclusion

The 20th century was known as the age of Anxiety and the 21st century is named as the age of Depression or perhaps even antenatal depression. With the increasing stress and upsurging challenges of our times, it is becoming increasingly difficult for a surgeon to lead a meaningful and satisfying life. Psychological approach towards patient is key in tackling depression in cancer surgery. People vary greatly in the degree of confidence and flexibility by which they cope with threatening situations. Several studies show that the intensity of distress following the onset of cancer is determined by such factors and by the degree to which people feel that the losses caused by the illness have made them different from others. This, in turn, can give rise to depression, problems of sexual adjustment, and other psychological difficulties[17;18]. This is as important as the surgeon's technical skill and like all other procedures practiced during training and refined over the years. Dealing effectively and compassionately with patients, pre and post-operatively, is a skill that can be nurtured. Also nurses who work closely with the medical and nursing staff can significantly reduce psychological morbidity as measured by self rating scales in women undergoing surgery for breast cancer[19]. As Parkes

stated, "Each time we succeed in helping someone else to face up to and cope with the awesome facts of life, we are indirectly helping ourselves." [20]. There are a lot of ups and downs in a surgeon's life. To ensure that the final tally shows more ups than downs, one has to possess character, competence, concern for the patient and professional excellence.

Anticipation of the psychiatric disturbances may come as a triumph in the management of the patient and the disease. Thus an opportunity arises to foster a close relationship between the two specialties of surgery and psychiatry. Psychiatrists and psychologists will have a greater role to play as we march further into the 21st century. Surgeons and psychiatrists will have to work in close conjunction if better patient care is to be administered. With the human genome being mapped, the immense possibilities of genetic manipulation and treatment are 'opening up' and the future outlook of a depressed patient definitely looks brighter than before [21].

References

1. Derogatis LR, Morrow GR, Fetting J, Penman D, Piasetsky S, Schmale AM, Henrichs M, Carnicke CL, Jr. The prevalence of psychiatric disorders among cancer patients. *JAMA*. 1983;249(6):751
2. Minagawa H, Uchitomi Y, Yamawaki S, Ishitani K: Psychiatric morbidity in terminally ill cancer patients. A prospective study. *Cancer*. 1996; 78(5):1131
3. Uchitomi Y, Mikami I, Kugaya A, Akizuki N, Nagai K, Nishiwaki Y, Akechi T, Okamura H: Depression after successful treatment for nonsmall cell lung carcinoma. *Cancer*. 2000; 89(5):1172
4. Faller H, Bulzebruck H, Drings P, Lang H: Coping, distress, and survival among patients with lung cancer. *Arch Gen Psychiatry*. 1999;56(8):756
5. Titchner JL, Levine M. Surgery as a human experience: The Psychodynamics of surgical practice. 1960. Oxford University Press.
6. Titchner JL, Zwerby I. Psychosis in surgical patient. *Surg Gynaecol Obstet*. . 1956; 59: 102-105
7. Moore F, Steinberg K. Studies in surgical endocrinology. *Ann Surg*. . 1955; 141-145
8. Chaturvedi SK, Chandra P, Channabasavanna SM. Detection of anxiety and depression in cancer patients. *NIMHANS Jr*. 1994;12: 141-144
9. Buckberg J, Penma C, Holland JC. Depression in hospitalized cancer patients. *Psychomed*. 1984;46: 199-212
10. SUTHERLAND AM, ORBACH CE, DYK RB, BARD M. The psychological impact of cancer and cancer surgery. I. Adaptation to the dry colostomy; preliminary report and summary of findings. *Cancer*. 1952; 5(5):857
11. Maguire GP, Lee EG, Bevington DJ, Kuchemann CS, Crabtree RJ, Cornell CE: Psychiatric problems in the first year after mastectomy. *Br Med J* 1.1978; (6118):963
12. Maguire P, Tait A, Brooke M, Thomas C, Sellwood R: Effect of counselling on the psychiatric morbidity associated with mastectomy. *Br Med J*. 1980;281(6253):1454,
13. Hannah MT, Gritz E, Wellisch DK, Fobair P, Hoppe RT, Bloom JR, et al. Changes in marital and sexual functioning in long term survivors and their spouses: testicular cancer versus Hodgkin's disease. *Psycho-Oncology* .1992;2, 89-103.
14. Schag CA, Ganz PA, Wing DS, Sim MS, Lee JJ. Quality of life in adult survivors of lung, colon and prostate cancer. *Qual Life Res*. 1994; 3(2):127
15. Northhouse LL, Swain JA. Adjustment of patients and husbands to initial impact of breast cancer. . *Nurs Res*. . 1987 ;36: 221-229
16. Plumb MM, Holland J. Comparative studies of psychological function in patients with advanced cancer--I. Self-reported depressive symptoms. *Psychosom Med*. 1977; 39(4):264
17. Harrison J, Maguire P, Ibbotson T, MacLeod R, Hopwood. Concerns, confiding and psychiatric disorder in newly diagnosed cancer patients: a descriptive study. 1994 ;3: 173-179
18. Weisman A, Worden JW. Coping and vulnerability in cancer patients Research report. 1977. Project Omega Boston: Department of Psychiatry, Harvard Medical School.
19. McArdle JM, George WD, McArdle CS, Smith DC, Moodie AR, Hughson AV, Murray GD: Psychological support for patients undergoing breast cancer surgery: a randomised study. *BMJ*. 1996; 312(7034):813,
20. Parkes CM, Bereavement. In, Kendrick T, Tylee A, Freeling P. The prevention of mental illness in primary care. 74-87. 1996. New York, Cambridge University Press.
21. Joshi Rajeev M, Shetty TS, Khithani AS. Depression in surgery: An insight. . *Indian Journal of Surgery*. 2003; 65[6]:475-479