

Elements of Risk and Risk Assessment in Cancer Risk Reduction

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Abstract

In paediatric 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 behaviour and school phobia.

Keywords: Hodgkin's disease; Patients trust; Diagnosis time; Subsequent treatments; Cancer surgery; Psychological approach

Introduction

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 and those of lung and prostate. 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. 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 [1]. 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 patient's trust [2]. 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 [3]. 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 North house and Swain suggested that the level of stress experienced by family members is compatible with that of the patients [4].

Methodology

Plumb and Holland reported that patients and the next of kin were indistinguishable in terms of level of depression. 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 [5]. Prolonged nature of the illness as in burns or a prolonged convalescence associated with orthopaedic and trauma surgery may also precipitate depression. 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 [6]. With the increasing stress and

up surging 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 as shown in (Figure 1). 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 [7]. This, in turn, can give rise to depression, problems of sexual adjustment, and other psychological difficulties. 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 [8]. 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. As 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. There are a lot of ups and downs in a surgeon's life as shown in (Figure 2). To ensure that the final tally shows more ups



Figure 1: Psychological approach towards patient.

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Received: 01-Jul-2023, Manuscript No. ACP-23-108106; **Editor assigned:** 05-Jul-2023, PreQC No. ACP-23-108106 (PQ); **Reviewed:** 19-Jul-2023, QC No. ACP-23-108106; **Revised:** 24-Jul-2023, Manuscript No. ACP-23-108106 (R); **Published:** 31-Jul-2023; DOI: 10.4172/2472-0429.1000176

Citation: Nai Q (2023) Elements of Risk and Risk Assessment in Cancer Risk Reduction. Adv Cancer Prev 7: 176.

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Figure 2: Helping someone else to cope with the facts of life.

than downs, one has to possess character, competence, concern for the patient and professional excellence [9]. 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 [10]. Since the human genome has been sequenced many mysteries of cell biology have been unravelled, thereby clarifying the pathogenesis of several diseases, particularly cancer. In members of kindreds with certain hereditary diseases, it is now possible early in life to predict with great certainty whether or not a family member has inherited the mutated allele causing the disease. In hereditary malignancies this has been particularly important, because in affected family members there is the possibility of removing the organ destined to develop cancer before malignancy develops or while it is in situ [11].

Discussion

At first consideration, it would appear that prophylactic surgery would have a place in many hereditary malignancies; however, the procedure has applicability only if certain criteria are met, the genetic mutation causing the hereditary malignancy must have a very high penetrance and be expressed regardless of environmental factors, there must be a highly reliable test to identify patients who have inherited the mutated gene, the organ must be removed with minimal morbidity and virtually no mortality, there must be a suitable replacement for the function of the removed organ, and there must be a reliable method of determining over time that the patient has been cured by prophylactic surgery. In this monograph we review several hereditary malignancies and consider those where prophylactic surgery might be useful [12]. As we learn, there are various barriers to performing the procedure in many common hereditary cancer syndromes. The archetype disease syndromes, which meet each of the five criteria mentioned above and where prophylactic surgery is most useful, are the type 2 multiple endocrine neoplasia syndromes, MEN2A, MEN2B, and the related familial medullary thyroid carcinoma. An additional benefit of the Human Genome Project, has been the development of pharmacologic and biologic compounds that block the metabolic pathway activated by specific genetic mutations [13]. Many of these compounds have

shown efficacy in patients with locally advanced or metastatic cancers, and there is the likelihood that they will prove beneficial in preventing the outgrowth of malignant cells in patients destined to develop a hereditary cancer. Breast cancer is the most commonly diagnosed cancer in American women, with an estimated 268,670 cases of invasive breast cancer and an estimated death toll of 41,400 women in 2018. This highlights the need for effective breast cancer screening and risk-reduction strategies [14]. For a woman who does not have a personal history of breast cancer, the risk factors for the development of breast cancer can be grouped into categories, including familial/genetic factors; factors related to demographics; reproductive history; lifestyle factors; and other factors such as number of breast biopsies, especially those finding flat epithelial atypia, atypical hyperplasia, or lobular carcinoma in situ, breast density, or thoracic irradiation before 30 years of age. Estimating breast cancer risk for an individual is difficult, and most breast cancers are not attributable to risk factors other than female gender and increasing age.² In the United States, 266,120 women are diagnosed with invasive breast cancer annually, compared with approximately 2550 cases that occur annually in men. The development of effective strategies for the reduction of breast cancer incidence has also been difficult, because few of the existing risk factors are modifiable and some of the potentially modifiable risk factors have social implications extending beyond concerns for breast cancer. Nevertheless, effective breast cancer risk-reduction strategies such as use of risk-reduction agents and risk-reduction surgery have been identified [15]. Women and their physicians who are considering interventions to reduce risk for breast cancer must balance the demonstrated benefits with the potential morbidities of the interventions.

Conclusion

Surgical risk-reduction strategies may have psychosocial and/or physical consequences for the woman, and risk-reduction agents, used for non-surgical risk reduction, are associated with certain adverse effects. To assist women who are at increased risk of developing breast cancer and their physicians in the application of individualized strategies to reduce breast cancer risk, NCCN has developed these guidelines for breast cancer risk reduction.

Acknowledgement

None

Conflict of Interest

None

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