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## The role of the Psychiatrist in the prevention and treatment of breast cancer

*O papel do Psiquiatra na prevenção e tratamento do câncer de mama*

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It is estimated that in the next triennium 2023-2025 there will be 74,000 new cases of breast cancer in Brazil, which accounts for 10.5% of all new cancer diagnosis<sup>1</sup>. In spite of the advances in treatment experienced in the last few decades, the impact on mental health and quality of life due to the disease still presents a challenge.

Countless factors are involved in carcinogenesis, known as the hallmarks of cancer. As examples, genetic and epigenetic alterations, limitless capacity to divide, enhanced angiogenesis, capacity of tissue invasion, the ability to escape from apoptosis, and evasion from the immunological system. Nonetheless, there is evidence that the mental state of patients also plays a role in carcinogenesis. Research in psychoneuroimmunology investigates the connection between psychological distress and its impact on cellular immune response and, consequently, on the protective abilities of the immune system<sup>2</sup>. Indeed, the hypothalamic-pituitary-adrenal axis (HPA), and the cytokine and interleukin production are signaling pathways that looks promising in understanding the correlation between cancer and mental state. Moreover, deregulation in the HPA axis, the abnormal cortisol secretion, reduced inflammatory responses and pro-tumoral activation are thought to worsen cancer prognosis.

Regarding breast cancer, there is also a correlation between the increase in estrogen synthesis and cortisol. Indeed, psychosocial support and promotion of psychological wellbeing might induce cortisol decrease in breast cancer<sup>2</sup>. There is also growing evidence that psychosocial interventions improve outcomes in patients with cancer, reducing anxiety, depression and other mood disorders<sup>2</sup>.

The long term impact of breast cancer encompasses several areas of life, from difficulty in following through daily routine and getting back to the job market, to various distressing feelings, such as fatigue, mood swings, sexual dysfunction, self-esteem issues and reproductive, religious and existential concerns.

The prevalence rates of depression and anxiety symptoms amongst breast cancer patients is 42% and 32%, respectively<sup>3</sup>. Some risk factors have been identified, such as young age at diagnosis, low level of education, symptom abundance, sleep disorders, and fear of death and of chemotherapy/radiotherapy treatments. In addition, there is a strong fear of recurrence, with implications in anxiety and depression symptoms<sup>3</sup>. This fear of disease progression or recurrence may bring forth repeated and distressing thoughts, which can be an independent factor in the psychological and emotional phenomena in these patients<sup>3</sup>. Regarding the diagnosis of depression, somatic symptoms such as anorexia, fatigue and insomnia are common both in cancer and in major depressive disorder. Therefore, in order to diagnose depression more accurately, one can rely on the report of non-somatic symptoms, like tearfulness, social withdrawal and self-pity<sup>4</sup>.

Likewise, surgical interventions are associated with an increase in the rates of anxious and depressive symptoms. When comparing mastectomy and conservative surgery, a correlation has been observed between type of surgery and body image, pain, lymphatic drainage in the upper limbs and sexuality.

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The treatment with hormonal therapy can cause hot flashes, insomnia and mood swings. Additionally, there are some considerations to be made as to the interaction between tamoxifen and some chemotherapies with selective serotonin reuptake inhibitors (SSRI), namely paroxetine, fluvoxamine and fluoxetine, and bupropion, because of the effect these drugs have on the cytochrome p450 2D6<sup>4</sup>.

Chemotherapy treatment frequently causes nausea, vomiting and alopecia. In fact, some patients experience such intense nausea and vomiting during treatment they may develop anticipatory nausea and vomiting. Situations or places that remind patients of their treatment, as well as scents, exam requests, prescriptions, among other things, may trigger anxious symptoms with nausea and vomiting that start on the way to the hospital, which can compromise treatment adherence and its conclusion. The adequate use of antiemetic prophylaxis and, if needed, anxiolytics, such as lorazepam or alprazolam, can reduce these phobic symptoms<sup>4</sup>.

Patients with schizophrenia, bipolar disorder and other psychosis suffer from higher mortality rates in breast cancer<sup>5</sup>, which indicates a need for more awareness in that population. In an attempt to understand the reasons this group has worse disease outcomes, some explanations were suggested, and difficulty in accessing healthcare is the main one. Regarding primary care, unfavorable lifestyle, namely hypercaloric diet, smoking and substance abuse; as to secondary care, worse attendance to periodic screening exams, and difficulty in discerning symptoms which can be from psychological or organic causes, such as lack of energy, appetite and

weight loss. Those limitations result in more advanced disease by the time of diagnosis, decreasing the chances of curative treatment. Furthermore, the obstacles faced in order to access specialized centers culminate in delayed treatment or its early interruption and, as a consequence, lower adherence to adjuvant therapies.

As psychiatrists, regardless of practice setting, and especially the liaison psychiatry professionals, we have a crucial role in working together with general practitioners and oncologists to improve the care provided to patients with breast cancer. Special consideration must be given to patients who have a history of serious mental disorders, being of critical importance the engagement of psychiatrists in promoting integral care.

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