

Cancer, Depression and Cliniclowns

Vincent Van Ginneken*

Blue Green Technologies, Runderweg 6, 8219 PK, Lelystad, The Netherlands

Introduction

After a couple of weeks in the hospital, Gijs mistrusted every 'white jacket'. And even if the doctors left their jacket out, he could smell trouble from a mile distance. With one exception of JoJo and the other clowns from CliniClowns (Figure 1). They never said a word. But just their appearance and a clumsy play with a small bouncing ball could lighten up the full day. For Gijs and for us, humor was of the essence all along. It is perhaps not the best medication against cancer, but certainly the best medication to live with cancer.

The purpose of this editorial is to indicate a relatively unknown approach in the 'hard' technical hospitalized medical world in order to treat cancer patients. Cliniclowns is a typical example of psychosocial intervention performed in Dutch hospitals where children are animated with cancer in order to forget for a moment their serious illness for the time being. I will broadly outline the limited literature related to cancer patients and depression. Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells and oncology is a branch of medicine that deals with tumors. Recently, I wrote a rather biochemical manuscript entitled "Targeting tumor metabolism: a biochemical explanation related to a Systems Biology Lipidomics Based Approach" [1]. In this rather technical biochemical review a Systems Biology approach was considered. A particular area of interest of Medical Systems-Biology, will be identification of novel safety biomarkers that can be used in the assessment of new intensive treatments both during their discovery phase and in clinical use to study e.g. metabolism-related diseases like cancer/tumors in combining the diagnostics with the patient therapy. Recent technological advances in metabolomics and lipidomics can potentially make a real contribution in increasing efficacy of drug development pipelines. A biomarker is defined as a substance used as an indicator of a biological state. It is characteristic that it is objectively measured and evaluated as an indicator of normal biological processes, nutritional intervention, pathogenic processes, or pharmacological responses to a therapeutic intervention like nutritional intervention [2] or produced by the tumor or as a consequence of e.g. the tumor environment which is hypoxic and has a low pH due to lactic acid formation, the "Warburg effect" [1].

What is "Systems Biology?" Systems biology is the computational and mathematical modeling of complex biological systems. An emerging engineering approach applied to biological scientific research, systems biology is a biology-based interdisciplinary field of study that focuses on complex interactions within biological systems, using a holistic approach (holism instead of the more traditional reductionism) to biological research or biomedical research [3]. But can we consider a patient as a "system"? A patient has its emotions, fears, depressions, its thoughts, its longings, its dreams but it can also suffer [4].

The whole process in a hospital after adopting a life-threatening illness can be regarded as mental and physical suffering especially for children. Cancer is considered as a serious and potentially life-threatening illness, and even in some cases deadly diseases without treatment which has an effect on psychological and physiological states of patients. Various studies have demonstrated the high levels of depression in cancer patients using a variety of assessment methods such as self-report, brief screening instruments, and structured clinical interviews.

There are two core symptoms of depression according to the Diagnostic and Statistical Manual of Mental Disorder (fourth edition), namely depressed mood and a marked loss of interest or pleasure in most or all activities. To qualify as depression, one of these two core symptoms must be present for at least 2 weeks, along with at least four other depressive symptoms. Somatic symptoms include fatigue, appetite disturbance or weight loss, sleep difficulties (often marked by frequent interruptions or early morning waking), and difficulties with memory and concentration [5].

In general (adults and children), cancer patients might be vulnerable to depression and anxiety for many reasons: reactions to cancer diagnosis, the presence of unpleasant symptoms associated with cancer (such as pain, nausea and fatigue), and concerns about disease recurrence or progression. Besides, the physiological effects of certain medical drastic measures also influenced anxiety and depression. In addition, advanced cancer is associated with emotional distress, especially depression and feelings of sadness [6,7]. It is unclear what the best way to counter these effects.

The human "mind-spirit-body" interaction is to some extent acknowledged in the triangle mental and psycho-somatic coaching and inter-correlations are extremely important. Psychosomatic medicine is an interdisciplinary medical field exploring the relationships among social, psychological, and behavioral factors on bodily processes and quality of life in humans. Clinical situations where mental processes act as a major factor affecting medical outcomes are areas where psychosomatic medicine has competence [8].

Recently, there are more and more indications cancer patients will benefit from psychosocial interventions by improving the quality of life (QoL) of patients especially in the domain of emotional functioning [9]. For patients with a depression due to cancer disease subsequent recommendations include initiation of antidepressant medication, psychotherapy (with or without concurrent initiation of anxiolytic medication), and consideration of referral to social work services or pastoral services before follow up or reevaluation. [10].

Nevertheless, evidence is accumulating to suggest that identification and treatment of depression among cancer patients will result in reduction in disease progression, improvement in survival rates, reduction in medical costs and improvement in quality of life [10,11].

Conclusion

Finally we come to the recommendation that the future of

*Corresponding author: Vincent Van Ginneken, Blue Green Technologies, Runderweg 6, 8219 PK, Lelystad, The Netherlands, Tel: +0031623646497; E-mail: vanginneken@hotmail.com

Received April 14, 2017; Accepted April 26, 2017; Published April 28, 2017

Citation: Ginneken VV (2017) Cancer, Depression and Cliniclowns. *J Depress Anxiety* S11: e001. doi: 10.4172/2167-1044.S11-e001

Copyright: © 2017 Ginneken VV. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



Figure 1: JoJo and the other clowns from Cliniclowns.

cancer should follow both approaches in the interest of the patient. Psychosocial interventions focused on the quality of life (QoL) of patients with advanced cancer are on one hand required besides on the other “hard technological medical” approach such as surgery, high-dose interferon therapy, radiotherapy and chemotherapy. Finding of an appropriate effective biomarker via a Systems Biology approach [3] for an early stage diagnosis of a cancer makes the suffering of a patient due to medical treatment for a patient just bearable.

References

1. Van Ginneken V (2017) Targeting tumor metabolism: A biochemical explanation related to a systems biology lipidomics based approach. *J Mol Biomark Diag* 2017 S: 2.
2. Ginneken V, Verheij E, De Vries E, Van Der Greef (2016) The discovery of two novel biomarkers in a high-fat diet C56bl6 obese model for non-adipose tissue: A comprehensive LCMS study at hind limb, heart, carcass muscle, liver, brain, blood plasma and food composition following a lipidomics LCMS-based approach. *Cell Mol Med* 2:13.
3. Kitano H (2002) Systems biology: A brief overview. *Science* 295: 1662-1664.
4. Van Ginneken VJT (2015) Painless “hunger-death” is a myth. *Acta Scientiae et Intellectus* 1: 17-28.
5. Kennedy SH (2008) Core symptoms of major depressive disorder: Relevance to diagnosis and treatment. *Dialogues Clin Neurosci* 10(3): 271-277.
6. Chochinov HM (2001) Depression in cancer patients. *Lancet Oncol* 2: 499-505.
7. Hotopf M, Chidgey J, Addington-Hall J, Lan Ly K (2002) Depression in advanced disease: A systematic review. Part 1. Prevalence and case finding. *Palliat Med* 16: 81-97.
8. Levenson JL (2006) *Essentials of psychosomatic medicine*. American Psychiatric Press Inc. ISBN 978-1-58562-246-7.
9. Uitterhoeve RJ, Vernooij M, Litjens M, Potting K, Bensing J, et al (2004). Psychosocial interventions for patients with advanced cancer – A systematic review of the literature. *Brit J Cancer* 91: 1050-1062.
10. House A, Stark D (2002) ABC of psychological medicine: Anxiety in medical patients. *BMJ* 325: 207-209.
11. Jacobsen PB, Jim HS (2008) Psychosocial interventions for anxiety and depression in cancer patients: Achievements and challenges. *CA-Cancer J Clin* 58: 214-230.