The Palliative Curative Treatment of Untreatable Metastatic Solid Tumor Patients by a Psycho-Neuroendocrino-Immunophytotherapic (PNEIF) Regimen with Natural Anticancer Agents

Paolo Lissoni[1], **Giusy Messina**[1*], **Fernando Brivio**[1], **Franco Rovelli**[1], **Luca Fumagalli**[2] **and Giuseppe Di Fede**[3]

[1]*International Institute of Psychoneuroendocrinoimmunology, Milan, Italy*

[2]*Manzoni Hospital, Surgery Department, Lecco, Italy*

[3]*Institute of Biological Medicine, Milan, Italy*

[*]**Corresponding author:** Giusy Messina, International Institute of Psychoneuroendocrinoimmunology, Milan, Italy; Tel: +39026693950; Fax: +39026700708; E-mail: giusy.messina@libero.it

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Abstract

Several natural agents, including both human endogenous neuroendocrine substances, namely the pineal hormones, and plants, mainly *Aloe*, *Myrrh* and *Magnolia*, have been proven to exert anticancer activities, due to antiproliferative and immunomodulating properties. On this basis, a study was planned in an attempt to evaluate the therapeutic efficacy of a psychoneuroendocrinoimmun-phytotherapic (PNEIF) regimen with pineal hormones and antitumor plants in a group of untreatable metastatic solid tumor patients, for whom no treatment other than the palliative therapy was available, because of lack of response to previous chemotherapies, poor clinical status or personal refusal of chemotherapy, and with a life expectancy less than 1 year. The pineal hormone melatonin (MLT) and 5-methoxytryptamine (5-MTT) were given orally at 100 mg/day in the dark period and at 5 mg in the light period of the day, respectively, in association with *Aloe* and *Myrrh* mixture at 10 ml thrice/day, *Magnolia* cortex at 500 mg twice/day and Bowellia at 1000 mg/day in patients with brain metastases. A complete response (CR) and partial response (PR) were achieved in 2 and in 8 patients. Then, an objective tumor regression was obtained in 10/132 (8%) patients. A stable disease (SD) was found in 61 patients, then a disease control (DC), consisting of CR plus PR plus SD, was achieved in 71/132 (54%) patients, whereas the remaining patients had a progressive disease (PD). A survival longer than 1 year was seen in 63/132 (48%) patients, and the percent of 2 and 3-year survival obtained in patients with response or SD was significantly longer than that found in patients with PD. The treatment was well tolerated and no relevant biological toxicity occurred. This preliminary study would demonstrate that a PNEIF combination with natural anticancer agents may prolong the survival time in patients, for whom no standard therapy was available other than the only palliative therapy, and with an expected survival less than 1 year.

Keywords: Anticancer plants; Natural anticancer agents; Pineal hormones

Introduction

Today, there is no doubt about the fundamental importance of the immune system in the control of cancer growth and that the anticancer immunity is namely a lymphocyte-dependent phenomenon [1,2], as demonstrated by the fact that the evidence of lymphocytopenia is one of the most negative prognostic factor in cancer patients [1-3]. With respect to the physiology of the antitumor immune response, the anticancer potency of the immune system could be further enhanced and amplifed at least from a theoretical point of view through two diferent strategies, consisting xroie ʧ pꭓכ fʆ ` ! ʻ]pנ

present it represents the only molecule existing in the world capable of counteracting the overall main phases responsible for cancer progression, including the loss of the apoptotic process and the persistent activation of cell surface receptors for tumor growth factors, such as epidermal growth factor (EGF), the alteration of intercellular junctions and the consequent change in the intercellular matrix and the stimulation of the angiogenesis, and cancer-related mechanisms responsible for the immunosuppressive status, which characterizes the advanced neoplastic disease. At the other side, several plants may produce anticancer substances, the most investigated of them are *Aloe* [16], *Myrrh* [17], *Cannabis Indica* [18] and *Magnolia* [19]. According to the results available upto now, the main anticancer cytotoxic molecules would be represented by aloehemodine for both *Aloe Vera* and Arborescens [16], guggulsterone for *Myrrh* [17], tetra-hydrocannabinol (THC) for *Cannabis* [18] and honokiol for *Magnolia* [19]. On these bases, a study was performed] ' Myrrh

T e clinical response was evaluated according to WHO criteria, by repeating the radiological examinations, including CT scan and PET, every 3 months. Patients were also assisted by a spiritual psychotherapeutic approach, consisting of progressively rediscovering the pleasure as a spiritual experience. Data were statistically evaluated by the chi-square test and the Student's t test.

Clinical Response *								**Survival (Years)**		
Tumors	n	CR	PR	CR+PR	SD	DC	PD	1	2	3
ALL	132	2	8	10 (8%)	61	71	61	63 (48%)	28 (21%)	16 (13%)
Lung	34	1	0	1	17	18	16	16 (47%)	7 (21%)	6 (18%)
Colon	19	0	2	2	10	12	7	10 (53%)	7 (37%)	4 (21%)
Pancreas	20	0	1	1	8	9	11	9 (45%)	1 (11%)	0
Biliary	11	0	1	1	4	5	6	5 (45%)	3 (27%)	2 (18%)
Stomach	9	1	0	1	3	4	5	2 (22%)	1 (11%)	1 (11%)
HCC	6	0	1	1	3	4	2	3 (50%)	2 (33%)	1 (17%)
Bladder	3	0	0	2	2	2	1	2 (67%)	0	0
Ovarian	14	0	1	1	8	9	5	9 (64%)	3 (21%)	1 (7%)
Melanoma	5	0	2	2	1	3	2	2 (40%)	1 (20%)	1 (20%)
Sarcoma	11	0	0	0	5	5	6	5 (45%)	3 (27%)	1 (9%)

*CR: Complete Response; PR: Partial Response; SD: Stable Disease; DC: Disease Control; PD: Progressive Disease