

Cancer Pain Management with a Venom of Blue Scorpion Endemic in Cuba, Called *Rhopalurus junceus* “Escozul”

Di Lorenzo L.^{*1}, Palmieri Chiara², Cusano Antonio¹ and Foti Calogero¹

¹Rehabilitation Unit Rummo BN Hospital Doctorate Program, Rehab Med Tor Vergata University, Rome, Italy

²Campus Biomedico Oncology, University of Rome, Rome, Italy

Abstract: During the management of cancer pain sometimes patients ask for alternative, unusual, non recognized approaches. Last year we followed a cancer patient treated with an active substance that is the venom of blue scorpions endemic to Cuba, called *Rhopalurus junceus* “Escozul” that experienced an unexpected total pain relief with a good recovery of muscle strength, vital energy and capacity to cope with daily activities such as meal, walking and interacting with relatives and caregivers. Researchers' working on the blue scorpion venom published preliminary data online referring of postulate antitumoral activity in human tumors *in vivo* and analgesic, anti-inflammatory and antiproliferative activities in experimental models *in vitro* and *in vivo* but unfortunately actual available clinical data are not results coming from recognized Randomized Controlled Trials supervised by appropriate IRB regulatory bodies but in a recent paper published on *Toxicon* in July 2011 Garcia-Gomez *et al.* describe the first general biochemical, molecular and functional characterization of the venom. What it is sure is this venom certainly warrant further investigation.

Keywords: Escozul, cancer pain, pain relief, gastrica cancer, *rhopalurus junceus*.

INTRODUCTION

When the clinician's goal is to minimize pain as much as possible, sometimes patients ask for alternative, unusual, non recognized approaches [1]. We recently followed a cancer patient treated with an active substance that is the venom of blue scorpions endemic to Cuba, called *Rhopalurus junceus* “Escozul” [2]. This 69 years old Caucasian male patient had a partial gastrectomy in 2005 for a gastric cancer. Late in 2009 he had a diagnosis of inoperable cancer relapse in stomach fundus with several hepatic metastasis. In January 2010, with a Pain Visual Analogical Scale of 7 out of 10, he started pain management with opioid. In August 2010 he received escalation doses up to Fentanyl patch 50 mcg die, morphine and NAISDs as needed. In September relatives asked about escozul therapy surprising us because we did not know anything about. The Escozul can only be obtained in Cuba, where laboratories are the only authorized institutions to produce and provide it. Escozul is unfortunately a product that is still under clinical research only in Cuba [2-6]. It has been released free of charge to all worldwide patients until 2011 and Cuban results are available in internet and only recently published in a scientific journal [2]. We can personally report that in Ojo de Avila, at Labiofarm Factory, every day patients come and queue for Escozul. Our patient did take escozul and started to take it on 9th of October. After only 18 days he was able to stop opioid and he did not get any pain killer from November to the last week of February 2011. From October to February 2011 he achieved an unexpected good pain relief with an effectiveness of about

90% (Pain VAS of 7.5 was reduced to Pain Vas of about 1.5. His hematological data were already surprising and patients reported also an unexpected reduction of Prostate-specific antigen (PSA) that was higher for a benign prostatic hyperplasia; patients experienced a repentine reduction of PSA value from 335 ng/ml to 54 ng/ml in only 1 month. Tumor Markers CEA, CA19-9 and CA125 in monitoring of response to systemic chemotherapy [7] were also significantly reduced to more than 50%. What was really astonishing in this patient was that venom did not seem to change the tumor status as reported in the CT scans performed during follow up but patients experienced an unexpected total pain relief with a good recovery of muscle strength, vital energy and capacity to cope with daily activities such as meal, walking and interacting with relatives and caregivers. He did not experience any side effect until the end of February and he died in March 2011 for a sudden myocardial infarction without any evidence of poisoning with an unexpected death probably due to a following classic arrhythmia. Speaking about venom actions, we know a first general biochemical, molecular and functional characterization of the venom [2] and researchers' working on the blue scorpion venom published preliminary data online referring of postulate antitumoral activity in human tumors *in vivo* and analgesic, anti-inflammatory and antiproliferative activities in experimental models *in vitro* and *in vivo*. Actual available clinical data are not results coming from recognized Randomized Controlled Trials supervised by appropriate IRB regulatory bodies but in a recent paper published on *Toxicon* in July 2011 Garcia-Gomez *et al.* describe the first general biochemical, molecular and functional characterization of the venom, that is referred to be used as a natural product for anti-cancer therapy in Cuba (ref). In his book “Los venenos de Escorpiones”, Dr. J.R. Alonso postulates three hypothesis of action: a systemic action as immunomodulator, a tissual

*Address correspondence to this author at the Rehabilitation Unit Rummo BN Hospital Doctorate Program, Rehab Med Tor Vergata University Rome, AO RUMMO Benevento, Italy; Tel: +39 338 6236957; Fax: +39 0824 57602; E-mail: luigidilorenzo2005@libero.it

action as inhibition of new vessels' development and a molecular action as alternator of cellular membrane of tumoral cells as citostatic effect that could induce apoptosis. Readers should be advised that the drug appeared originally to have more an anti-tumoral effect rather than serving as a pain medication [8-10]. Indeed, there are questions about the context of the use of this medication and if being used for research or as complementary therapy. My anecdotal personal opinion following constantly this patient and few other patients for pain management only (gastric cancer, lung cancer and cerebral astrogloma grade III) is that venom has analgesic activities. Unfortunately Cuban reports seem to have the same standard as the anecdotal reported experience of hundreds of patients in facebook groups and blogs. This letter is moved by a compassionate rationale and we do not aim to promote unproven therapies even because the worldwide extension of the "escozul" phenomena has been already easily amplified on line through research engines. Even if we cannot study Escozul, it seems to be worth and interesting for the Scientific "cancer/palliative/pain" community to read "inside" anecdotal experiences into a clinical and socioeconomic phenomena that has already involved the Pain Medicine World and Pain Specialist of several countries all over the world. As already stated, this venom certainly warrants further investigation.

CONFLICT OF INTEREST

None declared.

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