

Integrative Clinical Treatment of Grade II Soft Tissue Sarcoma with Homeopathic Mistletoe and Associations: Case Report

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Abstract: The centenary use of the Hippocratic era, the semi parasitic plant Mistletoe (*Viscum album* L.) from the Santalaceae family, has been used to improve immunity and staging of several tumor diseases, proving to be a biological agent in integrative medicine that promotes quality of life and presents antitumor activity by cytotoxicity, induction of apoptosis and inhibition of angiogenesis. Type II soft tissue sarcomas are rarer in animals than in humans, although the multimodal treatment of surgery-chemotherapy is elected, it is still not well established and has not increased survival, so we opted for the use of homeopathic mistletoe and nutraceuticals as integrative treatment. The aim of the present report was to describe the evolution and clinical staging of a Labrador retriever, which received Mistletoe (Ultra diluted *Viscum album*) in combination with natural food and acupuncture. We conclude that the combined use of homeopathic integrative mistletoe ultra-diluted therapies in this patient promoted the control and staging of the sarcoma, improved immunity and quality of life, clinical and laboratory side effects during the effect period of 58 months.

Key words: Mistletoe ultra-diluted, homeopathy, dog, neoplasm, soft sarcoma.

1. Introduction

Soft tissue sarcomas are tissue-derived tumors of mesenchymal origin [1, 2]. In dogs, they most often develop in the subcutaneous tissue and represent between 9 and 15% of all cutaneous or subcutaneous tumors [3] and 20.3% of malignant skin neoplasms [4] associated with vaccination, foreign materials or injections is also reported in cats and humans [5-7], but mostly unknown. Among conventional treatments, margin surgery has been the most practiced, secondly electrochemotherapy (ECT) to increase the intracellular release of cytotoxic drugs [8]. Integrative medicine uses several techniques in therapy, targeting the patient as an inseparable whole, where body and mind are a continuum, being fully treated to provide palliative

patients with a better quality of life in which conventional treatment is not so effective [9]. Integrative therapies such as Homeopathy, Acupuncture and Nutrology have been increasingly used in the veterinary environment. Mistletoe, also called *Viscum album* (Figure 1), is homeopathic remedy appreciated for many centuries, it was used empirically for several diseases by Hippocrates, Plínio, Paracelsus and the legendary nun Hildegard Von Bingen, however, from the 19th century with the anthroposophical studies of Rudolf Steiner and Ita Wegman appears the first use and indication of Iscador fermented extracts in European oncology [10, 11]. In the 20th century, Gaultier investigates the effects of the fresh extract in subcutaneous and oral applications on the blood pressure of humans and animals [11, 12]. The Mistletoe has more than 100 species identified around the world, however the best-known European species is Santalaceae, which is a semi-parasitic shrub dependent on

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Fig. 1 Mistletoe *in loco*.

the tree that hosts it, such as conifers and deciduous trees [11]. The host species used to produce the ultra-diluted Mistletoe comes from oak [13]. Pharmacological preparations can be divided into standardized herbal extracts at a certain level of lectin and anthroposophy with homeopathically produced fermented extracts such as Iscador® [14]. In Brazil, there are ultra-diluted homeopathic preparations of *Viscum album* (figure 2) in various dilutions studied *in vitro* [15, 16], *in vivo* [15, 17, 18]. The main anticancer compounds isolated are lectins [19, 20] and viscotoxins [21], however other active compounds such as flavonoids, phenolic acids, sterols, lignans, terpenoids, phenylpropanoids, alkaloids and fatty acids [22] and non-polar compounds [23], also showed antitumor properties. Acupuncture is an ancient technique, where a nervous stimulus through the local irritation generated by the acupuncture needle or by other methods of stimulation of the acupoints generates a microtrauma of the tissues, with a successive series of complex and integrated reactions. The sequential and simultaneous activation of neural, segmental, and suprasedgmental pathways will depend on the acupuncture point and the stimulus method performed, which ultimately lead to changes in blood flow and humoral responses and act on the immune system, which in the chosen case was the point VG14 (Governor vessel) is in a depression of the dorsal midline, between the seventh cervical vertebra and the



Fig. 2 *Viscum album* Injectcenter®.

first thoracic vertebra, in the cranial direction to the highest point of the interscapular, being used as immune system stimulants [24]. Cancer patients usually have alterations in their metabolism, both in the balance of nutrients and in the energy demand. Promoting nutritional therapy is essential to minimize or eliminate these undesirable effects, and it is in this context that nutraceuticals come in, acting directly on these changes caused by neoplasms [25].

2. Case Presentation

She was referred to the integrative oncology sector under the responsibility of Doctor Lopes, a female, Labrador retriever, 12 years old, neutered, complaining of chronic pain and kidney changes. His evaluation includes the report of the removal of several lipoma, adrenal hypertrophy, and grade-I renal failure and the presence of a subcutaneous mass in the sternal pectoral region and another lateral left costal arch (Figure 3) since 2016, growing which underwent fine-needle aspiration for cytology, and the sample consisted predominantly of a population of pleomorphic spindle cells, suggesting a mesenchymal neoplasm. The therapeutic plan was to continue with integrative



Fig. 3 (a) Grade II soft tissue sarcoma and (b) lipoma.

Table 1 Therapeutic Protocol.

Therapy/Year	2016	2017	2018	2019	2020	2021
<i>Phos/Ars/Vis</i>	X	2 times a week	3 times a week	3 times a week	1 time a week	X
Va D3+ Va D30	X	X	2 times a week	X	2 times a week	2 times a week
Va D2	X	X	X	X	X	2 times a week
Va 200chl	X	X	X	X	X	2 times a week
Va D6 + Va D9	1 time a week	X	X	2 times a week	X	X
Acupuncture	X	X	X	X	1 time a week	1 time a week
Natural food	full-time	full-time	full-time	full-time	full-time	full-time

therapies and monitor with ultrasound images, x-rays, and biochemical tests, prioritizing the patient's quality of life for as long as possible because he did not have metastasis. The patient underwent therapy with ultra-diluted *Viscum album* Injectcenter®, subcutaneously (Table 1), low carb natural nutritional management (AN) and acupuncture to help with pain and stimulate immunity throughout the therapy period from February 2017 to December of 2021 (58 months).

3. Results and Discussions

During the therapy period from February 2017 to July 2020 the slowly growing tumor mass was staged but reached a volume that implied a risk of rupture and we decided to surgically remove it in August 2020 and keep the same therapy in maintaining quality of life and preventing metastases. The patient was

assisted weekly receiving applications of Mistletoe (*Viscum album* ultra-diluted according to Table 2), natural diet and acupuncture to rehabilitate the immune system 1x a week (figure 4). Examinations were performed periodically Table 2 (laboratory tests), Table 3 (US, ultrasound), Table 4 (X-Ray) and Figure 5 (histopathological), and it is possible to observe that despite the tumor growth having a recurrence within one year after surgery due to the difficulty in obtaining the surgical margin, the patient maintained the physiological and biochemical parameters within the normal range, sociability without presenting side effects of the prolonged use of homeopathic oncological therapy, dying with cardiorespiratory failure, due to causes possibly related to age in December 2021 at 17 years, when compared to the use of adjuvant radiotherapy after incomplete excision,

which achieved 1- and 3-year survival rates of 80 to 87% and 61 to 81% [26-28]. In agreement with the clinical results obtained, [16, 17] who observed the antimetastatic and immunomodulatory effect in patients with malignant neoplasms and anti-metastatic action according to Lopes [17, 18, 29]. Doses were individually adjusted and diversified at each therapeutic moment according to the evolution of the clinical picture in accordance with are generally applied at a low dosage, individually adjusted according to the local injection site reactions (LR) and individual tolerability is also applied at high dosages, intratumorally, systemic (subcutaneous), or as an intravenous infusion to achieve tumor remission or to substantially improve quality of life [30]. There were no reports during the treatment period of allergic reactions, pruritus or hepatotoxicity as reported [13].



Fig. 4 Acupuncture session.

Table 2 Results of laboratory tests.

Profile	2016	2017	2018	2019	2020	2021
Red cells	7.16 mil/mm ³	7.1 mil/mm ³	X	7.43 mil/mm ³	X	6.4 mil/mm ³
Hematocrit	52%	48%	X	50%	X	41%
Hemoglobin	17.9%	16.1%	X	15.4%	X	14.3%
Proteins	8.4 g/ml	8.2 g/ml	X	6.8 g/ml	7.7 g/ml	8.6 g/ml
Platelets	200 mil/mm ³	200 mil/mm ³	X	250 mil/mm ³	X	578 mil/mm ³
Leukocytes	12.2 mil/mm ³	10.9 mil/mm ³	X	6.8 mil/mm ³	X	6.2 mil/mm ³
Urea	92 mg/dl	24 mg/dl	X	15 mg/dl	X	47 mg/dl
Creatinine	1.0 mg/dl	0.9 mg/dl	X	0.6 mg/dl	X	0.9 mg/dl
ALT	68 UI/dl	66 UI/dl	X	96 UI/dl	136 UI/dl	150 UI/dl
GLUCOSE	82 mg/dl	111 mg/dl	X	X	74 mg/dl	110 mg/dl
ALF	226 UI/L	237 UI/L	X	173 UI/L	190 UI/L	X

Table 3 Ultrasound.

Exam Image	17/02/17	12/02/19	17/09/20	01/05/21
Adrenal gland	R (2.98 X 0.87 cm) L (2.75 X 1.10 X 1.04 cm)	Not viewed	L 1.92 cm R (2.82 X 1.16 X 1.87 cm)	L (1.95 X 2.50 X 4.95 cm) R (0.91 X 3.37 cm)
Liver	Normal	Normal	Nodule 2.30 x 1.45 cm	Several nodes 2.80 cm
Splen	Normal	Nodule 0,46cm	Nodule 0.58 x 0.40 cm	

Table 4 X-ray Exams.

Exam Image	Report X -ray
Dec 2018	No metastatic changes
May 2021	Discrete diffuse broncho interstitial opacification on the left side
Oct 2021	Pulmonary field opacification, unstructured interstitial pattern compatible with pulmonary osteoma, without metastases



Campinas, 01 de agosto de 2020

FIONA

Canina Labrador Fêmea 14 Anos
Sr(a). Natália Cabral
Dr(a). Clarisse M. Teixeira

HISTOPATOLÓGICO

DIAGNÓSTICO

A-) SARCOMA DE PARTES MOLES GRAU II.

- Grau de diferenciação: Pouco diferenciado.
- Necrose Tecidual: Presente em menos de 50% da área tumoral.
- Índice Mitótico (10 campos/40x): 5 figuras.
- Nível de invasão/infiltração: Panículo/musculatura.
- Margens cirúrgicas: Comprometidas.

B-) CISTO EPIDERMÓIDE.

C-) LIPOMA.

D-) MÚLTIPLOS CISTOS EPIDERMÓIDES.

OBSERVAÇÃO Os distintos sarcomas fusiformes caninos, tais como fibrossarcomas, tumor maligno de bainha de nervo periférico, mixossarcomas, entre outros, exibem comportamento e prognóstico similar, mais comumente caracterizado por comportamento local agressivo e probabilidades de desenvolvimento de metástases dependente de graduação de acordo com grau de atipia do tumor. Tumores de partes moles caninos de grau I a grau II apresentam probabilidades de metástase menor que 20% e prognóstico pós-cirúrgico favorável na maioria dos casos. Tumores de partes moles caninos grau III apresentam probabilidade de metástase em torno de 50% dos casos.

Fonte: M. M. Dennis, et a. Prognostic Factors for Cutaneous and Subcutaneous Soft Tissue Sarcomas in Dogs. Vet Pathol 2011 48: 73.

Fig. 5 Histopathological.

4. Conclusions

Through this clinical study, we were able to verify that the homeopathic ultra-diluted preparation of Mistletoe by subcutaneous, added to the integrative techniques of acupuncture and natural nutrition, promoted biological modification stimulating the vital forces that promote quality of life, a benefit to the patient,

significantly increasing the survival time compared to other oncological techniques available for this type of soft tissue sarcoma II. The most relevant factor is the safety in the applications and in the time of use, which suggests that, as it is an ultra-diluted product, it differs from other phytotherapy presentations and fermented extracts, noting the absence of any clinical and laboratory effects during the period of 58 months.

Informed Consent Statement

This is a clinical case report where the tutor responsible for the patient authorized the use and the publication data.

Acknowledgements

The authors are grateful for the support and generosity of the Company Injectcenter from Ribeirão Preto, SP, Brazil, for the supply of inputs and the LamassonIdis School for its support to the research, without which this study could not have been concluded.

Disclosure Statement

The authors declare no conflict of interest.

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