Versikor500® supplementation in palliative care of companion dogs suffering from malignant evolutive solid tumors

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Introduction

PSP: polysaccharideopolypeptide extracted from CoV-1 strain of Coriolus Versicolor spawn.

In human
- Used in traditional chinese medicine and in human clinical practice in Asia as adjuvant in anti-cancer treatment
- Known as immunomodulator: IFN-γ / IL-2 / TNFa
- Sekhon, B. K., Sze, D. M. Y., Chan, W. K., et al (2013) Clinical parameters during the study, Versikor® was allowed
- Decreases the paraneoplastic effects and adverse reactions of chemotherapy in human (Liu, 1993)

Versikor500® is a food supplement enriched in PSP (>38% polysaccharides, >11.5% peptides) dedicated to dogs and cats

AIM OF THE STUDY

Primary objective:
- Evaluate the immunomodulatory effect of Versikor500® on dogs suffering from solid malignant tumors

Secondary objectives:
- Evaluate the impact of Versikor500® on dog quality of life suffering from cancer and on its owner quality of life
- Confirm the safety of Versikor500® administration on dogs suffering from cancer

Exploratory objective:
- Evaluate the overall survival of dog receiving Versikor500®

Materials and methods

EXPERIMENTAL DESIGN
- Multicentric non-comparative study (12 investigation sites in France and Belgium)
- 22 dogs suffering from malignant evolutive solid tumors (cytologically or histologically confirmed)
- Owners that refuse surgery of the primary tumor or any adjuvant treatment of residual disease (radiotherapy or chemotherapy)
- Dogs not treated with immunosuppressive or analgesics treatments
- During the study, if required by the clinical status of a dog, maximum 5 days of corticosteroids or analgesics treatment (NSAIDs or Tramadol) was allowed

STUDY DESIGN

49 days of Versikor500® treatment at 100 mg/kg/day (500mg per tablet per 5kg body weight)
- Oral administration twice a day at home during the meal (morning and evening)

STUDY TREATMENT

Complete Blood Count and Biochemistry parameters evaluation were performed by a central laboratory (Veibo, France). Cytokines assessment was performed in two batches using LumineX technology by the central laboratory.

Study population

22 dogs included in the study
- 6 Males/ 16 Females
- 12 neoadjuvant / 10 adjuvant
- Mean age: 10.7 years old (6-16)
- Mean body weight (at V0): 23.5 kg (9.5-53)

16 dogs completed 50 days of study duration

Treatment compliance:
- Mean 98.9%

Tumors types:
- 13 Sarcomas (59%): various types, from very aggressive (1 osteosarcoma, 3 hemangiosarcomas, 1 histiocytic sarcoma) to low grade soft tissue sarcoma
- 4 Mammary carcinomas (18.2%): 2 tumors with grade 3 and 2 tumors with metastasis
- 3 Melanomas (13.7%): 2 oral and 1 nail bed
- 2 Mastectomies (9.1%): grade 2
- 50% without surgery of the primary tumors
- 27.3% had metastasis

Acknowledgment

We would like to thank especially pet owners and investors who actively participated in the case enrollment process for this study. Versikor500® is freely provided to study participants that are alive, if investigator and pet owner want to continue the treatment.

Results

IMMUNOMODULATORY EFFECT

Analyses of immunomodulatory effect of Versikor500® were realized on the dogs which received the treatment for the entire study period and only those that underwent treatment which could affect immune response.

Population of analysis: 10 dogs

DOG QUALITY OF LIFE

Analysis of dog quality of life was performed on dogs which received the treatment for the entire study period.

Decrease of quality of life score = improvement of dog quality of life

Population of analysis: 16 dogs

5 SELECTED CASES WITH PROLONGED SURVIVAL

- 1 dog with appendicular osteosarcoma - 124 days of survival with euthanasia, euthanized due to severe pain (median survival time for OSA with amputation +133 days) (Spodick GI et al, 1992)
- 1 dog with sub-cutaneous hemangiosarcoma (uncomplete exeresis) - 338 days of survival on Versikor500®, natural dead (median survival time with or without cancer treatment is 172 days Shu KB et al, 2011)
- 1 dog with mammary adenocarcinoma with hepatic metastasis and pancreatico - 180 days of survival, euthanized due to disease progression
- 1 dog with nail bed melanoma after surgery of the forelimb primary tumor with loco-regional lymph node metastasis - 308 days of survival, still alive, in good health condition and still on Versikor500®

Conclusion

The majority of dogs with asssesable cytokines level, showed an increase of IFNy, IL-2 and TNFa serum concentration after 49 days of Versikor500® treatment.

IL-2 is used in human medicine for its anti-tumour effect, especially in kidney cancer with metastasis. The treatment is currently limited due to adverse effects of intravenous injection of this cytokine.

Enrolled dogs maintained their quality of life during 50 days of study with preservation of appetite. Pet owners were less anxious by their dog’s illness.

No adverse events were reported related to Versikor500® administration.

Some cases presented prolonged survival.

To sum up, Versikor500® stimulates canine immune system and can be added of value in palliative care for various types of cancer.

PSP is currently used as adjuvant to other anti-cancer treatments in human and demonstrates its ability to decrease their side effects and to maintain patients quality of life. Giving this effect, additional study with Versikor500® as adjuvant treatment would be of a major interest in dogs.

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References