

Post-surgical follow-up treatment in canine mammary tumors with biological remedies

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Introduction

Tumor diseases currently represent the main cause of death in dogs and cats (Withroew and Machwen, 1996). Among tumor diseases in dogs, mammary tumors in turn are one of the most frequently diagnosed neoplastic changes, making up a proportion of about 40-50% in bitches (Simon *et al.* 1996), and in rare cases (1.3%) mammary tumors can also occur in male dogs (Simon *et al.* 1996).

Surgical removal of tumors is still to be regarded as the treatment of choice. Needless to say, the unsatisfactorily high incidence of recurrences and metastases and the closely correlated survival rate cannot be improved significantly by removal of the tumor. In addition, in recent years it has also been shown that the proportion of malignant tumors among mammary tumors in bitches, which was previously held to be not too high, is indeed in the region of 50% or more, up to 70 or 80%. Since Homotoxicology, in the context of its pathology offers a theory of tumor formation and also provides appropriate remedies to eliminate causal factors, it was obvious to investigate the effectiveness of this anti-homotoxic treatment on tumor diseases.

Treatment with intermediate catalysts

Tumor diseases in particular are characterized by impaired cell respiration, leading to cell damage and therefore, disease. By administration of certain preparations with homeopathic constituents, so-called intermediate catalysts, the organism is helped to compensate for intermediate dysfunctions in the citric acid cycle and in the respiratory chain.

The preparation **Coenzyme compositum** (manufacturer: Biologische Heilmittel Heel GmbH, Baden-Baden) contains salts and acids of the citric acid cycle as intermediate catalysts in homeopathic form. It is used generally for chronic or degenerative diseases and for disturbances in enzymatic functions.

Ubichinon compositum (Heel, Baden-Baden) is also indicated for severe states of disease, such as degeneration or degradation of tissues where the endogenous defense and repair mechanisms are no longer adequate. The constituent ubiquinone contains reactive carbonyl groups. Ubiquinone has a potent regenerative effect on blocked enzymes, especially in the respiratory chain. The medicinal action of quinone compounds was worked out theoretically and experimentally by the American clinician Koch (1981). The preparation **Para-Benzochinon-Injeel forte** (Heel, Baden-Baden) also has a regenerating effect on cell respiration.

As well as these cell metabolism-activating substances, biotherapeutics which lead out toxins are additionally used in treating tumor diseases. **Lymphomyosot** (Heel, Baden-Baden) is a suitable combination preparation for this. In this study, Lymphomyosot was used orally as drops along with an injection treatment. All the preparations mentioned are homeopathic remedies.


Study type, material and method

The investigation was designed as a prospective, open clinical study and the results were then compared with an external control. Between May 1996 and December 1998, 34 bitches brought into the Small Animal Clinic of the Veterinary Institute of the Georg-August University in Göttingen, Germany with proliferations in the teats were given postoperative biological treatment. The age of the dogs was between 6 and 17 years (average age 11.1 years).

Treatment concept, investigation and control plan

A standardized treatment plan, which in a similar form has already been described as effective when used in practice (Boynes 1992, Braun 1986, Gratz 1981), was specified for the study (Table 1). The treatment aim was to prolong survival times and reduce the incidence of recurrences or metastases.

Table 1. Treatment scheme combined to surgical removal of mammary tumors



Coenzyme compositum + Ubichinon compositum	Mixed injection 2x weekly (or 1x/week) s.c.	up to 10 kg BW: 1 ml of each preparation > 10 kg BW: 2.2 ml of each preparation
Para-Benzochinon-Injeel forte	1x weekly s.c. together with the above products	1.1 ml (1 ampoule) per animal
Lymphomyosot drops	1x daily orally	up to 10 kg BW: 10 drops/day > 10 kg BW: 15 drops/day
The treatment series were carried out over 4 weeks, then after a 4-6 week pause, another 4 weeks of treatment.		

The biological treatment was started one day postoperatively with a mixed injection of Ubichinon compositum and Coenzyme compositum. The second injection of Ubichinon compositum, Coenzyme compositum and Para-Benzochinon Injeel forte was given in the context of wound control (3rd or 4th day postoperative). The treatment was continued according to this plan twice weekly. After the operation, the patients' owners were also given Lymphomyosot drops, which were administered in parallel once daily in the stated dosage via food.

The treatment described was carried out for four weeks. This was followed by a pause of 4-6 weeks. The patients then again received Lymphomyosor drops orally for four weeks, and a mixed injection, only once a week, of Ubichinon compositum and Coenzyme compositum with Para-Benzochinon-Injeel forte. After the second treatment period, no further treatment took place in this study.

Results and discussion

Of the 31 samples investigated, 26 (83.9%) were classified as malignant and 5 (16.1%) as benign or not neoplastic. The adenocarcinomas showed the highest proportion here at more than 50%, followed by the malignant mixed tumors with 16.1%. Since the treatment had already been started before the histology results were available, the treatment was also continued on the benign or non-neoplastic teat proliferations (n=5) and included in this documentation. Since the age and breed distribution compares very well with other studies, a study by the Veterinary College in Hannover (Simon et al. 1996) was used as a so-called external control.

Survival rate and incidence of metastasis

The percentage data given in the following, just as in the literature works cited, relate to the total population of the study unless stated otherwise.

With the biological after-treatment, a survival rate after one year of 73.5% was achieved (26.5% died). In the study of Simon et al. (1996), in contrast, 37.3% did not survive the postoperative investigation period of one year. The mortality rate after two years in the Bostock (1975) study is 48%. With biological after-treatment, in this study, a proportion of dead animals of 35.3% resulted. The 2-year survival rate also is therefore over 10% more favorable than without after-treatment.

Also in respect of recurrences, the results with biological after-treatment are more favorable than in the case of animals from other studies treated purely by surgery. 49.3% of the bitches operated on (based on the total population) showed recurrences and/or metastases within one year in the study of Simon et al. (1966). By comparison, in this study, the recurrence or metastasing frequency after one year was 23.5%. Therefore, this results in a very clear advantage for biological after-treatment, since the incidence of recurrences or metastases was more than 25% below the values quoted in the literature. If only the patients with malignant tumors are considered, with after-treatment there is a rate of recurrence or metastasing after one year of 26.9%, while the corresponding value of Simon et al. (1966) is 45% (mammary 30%, lung 15%). From this point of view, a treatment advantage of approximately 20% is thus possible.

With the possibility of using the same biological treatment plan preoperatively to achieve a better precise demarcation of tumors with highly infiltrative growth, the prerequisites for complete removal of tumors can also be improved. Even with purely conservative treatment, which in some cases represents the only measure which can be carried out, a positive effect is generally found (halt of growth or reduction in size, sometime better demarcation; Kurth 2000).

Acceptance and tolerability

No intolerance symptoms were observed in the study either by the veterinarians or by the animal owners. A remarkable advantage of the treatment used here compared with the therapeutic alternatives, such as, for example, chemotherapy, is therefore to be seen as very good tolerability. All animal owners with whom the possibility of biological after-treatment was discussed were prepared to carry out this treatment. The acceptance overall is therefore higher than with chemotherapy, which was categorically rejected by 27% of those asked by Simon et al. (1996). No particular safety precautions are required when handling the preparations used here.

Conclusion

The following conclusions can be drawn from the study:

- The postoperative treatment tested, with 2 treatment series in the first 3 months after the surgery, improved the survival rate after 1 year and after 2 years by at least 10% compared with literature data (average age at operation: 11.1 years).
- The rate of recurrence or metastasis 1 year postoperative was more than 25%, taking into account the total population, or approximately 20% taking into account only the malignant cases, both of which are better than literature data.

In spite of the only limited conclusiveness of purely percentage data and the contributory effect of individual factors (age at the time of the operation, degree of metastasing at the first appointment, distribution of the types of tumors and malignancy levels), a clear trend is detectable: biological treatment according to the plan described above has a positive influence on the phase after removal of the tumor. Good results were achieved above all on mammary tumors of low or moderate malignancy. The frequency of recurrence and metastasing and the associated survival time were improved significantly compared with literature data.

The following can therefore be recommended to optimize the treatment: the restriction to two treatment series imposed on experimental grounds can usually be lifted for an individual patient in the practice. From empirical observations, about 3 - 4 treatment series a year are recommended. A treatment plan for highly malignant tumors should be developed and tested, and such a study again is currently in progress in Göttingen.

Literature

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*The original article has been modified and truncated for this publication.