

Research Article

Integrative Treatment of Mammary Neoplasm in a Cat Induced by Injectable Hormonal Contraceptive

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Abstract

Mammary neoplasms are among the most common malignancies in cats, representing the third most frequent tumor type. In some cases, these neoplasms may be associated with the prolonged use of injectable hormonal contraceptives. The standard treatment protocol typically involves ovariectomy, bilateral mastectomy, and, when clinically indicated, chemotherapy. This case study reports on a cat diagnosed with mammary carcinoma, potentially induced by the administration of hormonal contraceptives. Due to financial constraints, the recommended ovariectomy, mastectomy, and chemotherapy were not performed. Instead, the patient was treated using an integrative veterinary approach, with the injectable homeopathic *Viscum album* as the primary therapeutic agent. The treatment protocol resulted in a marked reduction in tumor volume, improved overall patient condition, and no observed adverse effects. This case highlights the potential of *Viscum album* as a complementary therapeutic option to manage feline mammary neoplasms, emphasizing the importance of integrative strategies that prioritize patient well-being. Further research is warranted to validate the efficacy and elucidate the mechanisms of this treatment in broader clinical applications.

Keywords: Mammary neoplasm; Female cats; Hormonal contraceptive; *Viscum album*; Integrative veterinary medicine; Homeopathy

Introduction

Mammary neoplasms represent one of the most prevalent tumors in intact female cats, ranking as the third most common tumor type within the species. These neoplasms are frequently malignant and characterized by a high metastatic rate and poor prognosis [1]. The incidence of mammary tumors is significantly higher in females that are either not spayed or spayed after their first estrus cycle, compared to those undergoing ovariectomy before their first estrus [2]. Prolonged use of hormonal contraceptives, particularly injectable formulations, has been identified as a major risk factor for the development of mammary neoplasms. This is attributed to the hormonal influence on receptors present within mammary tissue [3].

Standard treatment modalities include surgical interventions such as bilateral mastectomy, chemotherapy [4], radiotherapy [5], and electrochemotherapy [6]. However, these conventional approaches are often accompanied by significant adverse effects and present considerable challenges related to cost and accessibility, particularly in resource-limited settings. Integrative veterinary medicine has gained recognition as a promising alternative, combining conventional and complementary therapeutic modalities to enhance treatment efficacy and improve patient quality of life [7].

Among complementary therapies, *Viscum album*, a medicinal agent widely employed in anthroposophical and homeopathic medicine, has garnered attention for its antitumor and immunomodulatory properties. Research indicates that *Viscum album* extracts inhibit cell

proliferation, induce apoptosis in tumor cells, and enhance the quality of life of cancer patients [8]. Despite these promising attributes, the application of *Viscum album* in veterinary medicine remains underexplored, with only limited preliminary studies available [9].

This report details a clinical case of a feline patient with mammary neoplasms, potentially induced by injectable hormonal contraceptives. The patient was treated primarily with the injectable administration of *Viscum album* as part of an integrative therapeutic approach. Furthermore, the report discusses the possible mechanisms of action and the broader implications of utilizing this therapeutic agent to manage feline neoplasms.

Case Report

A 2-year-old female cat weighing 3.1 kg, intact, was evaluated during a veterinary home visit. The cat had a six-month history of mammary gland enlargement, which subsequently developed ulceration in part of the affected area. The cat was fed a commercial diet *ad libitum*. The owners reported the use of injectable progestins as a contraceptive method since the cat's first estrus, which occurred at five months of age. On physical examination, the animal exhibited pale mucous membranes, a capillary refill time (CRT) of 3 seconds, and an alert demeanor with a good appetite. No abdominal discomfort was noted, and the animal demonstrated a calm temperament. Examination of the mammary glands revealed a sizable ulcerated mass without apparent bleeding (Figure 1), clinically indicative of a mammary tumor. Due to financial constraints, no blood tests or imaging studies



Figure 1: Image of the mammary tumor of varying dimensions in August 2024, at the initiation of treatment.



Figure 2: Image of the ulcerated tumor in September 2024, after treatment initiation.



Figure 3: Image of the ulcerated tumor in October 2024, showing significant reduction following treatment initiation.

could be performed, as the family lacked resources. The service was provided voluntarily, and all medications were donated. The treatment protocol included oral administration of vitamin D3 (1000 IU/SID), vitamin C (500 mg/SID), omega-3 fatty acids (1000 mg/SID), and *Ganoderma lucidum* (90 mg/SID). Injectable treatments administered subcutaneously consisted of *Viscum album* D3 (1 ampoule, 1.1 mL, Injectcenter) every other day for 60 days and a combination of *Viscum album* D4, *Viscum album* D30, and *Lachesis* D15 (1 ampoule, 1.1 mL) administered SID, three times weekly for 60 days.

Results

Follow-up I – At the beginning of treatment (September 2024), the owner reported an improvement in the patient's overall condition. The cat was more active, well-disposed, and had an improved appetite (Figure 2). The treatment protocol was recommended to be continued.

Follow-up II – By October 2024, the owner observed a notable reduction in the lesion's size, with approximately 50% improvement (Figure 3). The cat's behavior remained stable and unchanged throughout the period. The treatment protocol was advised to be continued.



Figure 4: Image of tumor regression in December 2024, demonstrating significant reduction following treatment.

Follow-up III – In December 2024, the owner reported approximately 90% improvement in the lesion (Figure 4). The cat's behavior remained stable and unchanged. The treatment protocol was continued.

Follow-up IV – By January 2025, the lesion showed continuous improvement, with complete remission observed (Figure 5). The patient's behavior remained stable, and the treatment protocol was maintained.

The patient remained stable throughout the treatment period, and no adverse effects were reported over the six months of therapy. The tumor regressed progressively and completely without bleeding (Figure 6).

Discussion

The association between the use of hormonal contraceptives and the development of mammary neoplasms in cats is well-documented in the literature. These contraceptives provide continuous hormonal stimulation, predisposing mammary tissue to tumor development [1]. The inability to perform ovariohysterectomy, compounded by the administration of progestins in the present case, underscores the significant impact of hormonal factors on tumor development and progression.

This case highlights the potential therapeutic role of the injectable homeopathic medicine *Viscum album* as an adjunctive tool in managing feline mammary neoplasms, particularly when surgical intervention is not feasible due to financial constraints or comorbidities. Over six months, the treatment achieved complete tumor remission, demonstrating promise as a complementary approach for feline oncology.

The therapeutic use of *Viscum album* in integrative veterinary medicine, though not extensively explored, is supported by studies demonstrating its ability to stimulate the immune system, selectively induce apoptosis in tumor cells, and improve the quality of life of cancer patients [10,11]. The results of this case are consistent with these findings, suggesting that *Viscum album* can effectively reduce tumor mass and control disease progression in feline patients. Similar outcomes have been reported by Valle & Carvalho (2021), who documented complete remission of squamous cell carcinoma in a dog treated with injectable homeopathic *Viscum album*.

The rapid and progressive remission of the mammary tumor within six months highlights the potential of this approach, particularly in resource-limited settings where surgical or chemotherapeutic interventions are inaccessible. Furthermore, the absence of adverse



Figure 5: Image of tumor regression in January 2025, showing complete remission following treatment.



Figure 6: Image of tumor regression in January 2025, showing complete remission following treatment.

effects in the treated patient supports the safety of *Viscum album* administration, aligning with previous findings from both veterinary and human medicine [12]. Despite the encouraging outcomes, the lack of complementary diagnostic tests in this case presents a limitation in confirming precise tumor characteristics or prognosis. Nonetheless, the clinical progression and photographic evidence demonstrate favorable therapeutic outcomes.

This case underscores the importance of integrative therapies in veterinary medicine and highlights the need for further scientific investigation into using *Viscum album* in veterinary oncology. For patients with limited access to conventional treatments or contraindications to surgery and chemotherapy, complementary approaches such as *Viscum album* therapy may represent a viable and effective alternative for managing various neoplasms, improving quality of life, and, in some cases, achieving complete disease remission. These results contribute to the growing body of evidence supporting the antitumor and immunomodulatory potential of *Viscum album*, suggesting expanded applications in integrative veterinary oncology.

Conclusion

The successful use of *Viscum album*, in this case, demonstrates its potential as a valuable adjunctive therapy for feline mammary neoplasms, particularly in resource-limited settings where conventional treatments may not be accessible. Despite the absence of standard diagnostic tools and surgical interventions, the observed tumor regression and the lack of adverse effects suggest that *Viscum album* could offer a promising alternative. This case contributes to the growing body of evidence supporting the role of integrative medicine in veterinary oncology, highlighting the need for further exploration into its clinical applications and therapeutic mechanisms.

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