Massage Therapy for Dogs and Cats

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Massage is gaining recognition as a beneficial modality for the treatment of many ailments due to recent scientific research in humans. We can infer that these benefits apply to dogs and cats due to their similar physiology and anatomy. Defined as the therapeutic manipulation of soft tissues, massage has many effects on muscle, the circulatory system, the autonomic nervous system, and the mind. Various techniques are employed to achieve a desired effect in the treatment of many conditions, including but not limited to, swelling and edema, critical illness and prolonged recumbency, osteoarthritis and chronic pain, and palliative and hospice care. This article reviews the above topics and encourages the practitioner to seek out expert advice on massage in the care of companion animals.

Introduction

Traditionally, the word “massage” would cause an individual to envision lowly lit rooms and relaxing music at a day spa. However, attitudes toward massage are changing. According to the 17th annual consumer survey by the American Massage Therapy Association, 75% of individuals claimed their primary reason for receiving a massage was medical and stress related. Only 34% of respondents believed massage therapy is only a form of pampering. This is because recent scientific research in humans has documented great benefits from therapeutic massage for a variety of health conditions. Although the scientific evidence for the benefits of massage in companion animals is mostly lacking, we can still gain insight into its potential effects on dogs and cats.

Physiology of Massage

Massage is defined as the therapeutic manipulation of the soft tissues of the body, and it has mechanical, physiological, and psychological effects. When massaged, a muscle is mechanically stretched, reducing its tone and increasing its pliability. Over time, this can lead to a reduction in muscle soreness and an increase in connective tissue strength. Scar tissue is also mobilized and softened, helping to maintain movement between tissues and restore function after injury or surgery.

Physiologically, massage increases interstitial pressure, which in turn increases venous and lymphatic flow. Massaging in a distal to proximal direction is recommended to move fluid from the extremities back to the central circulatory system. In addition, as the hands move, squeeze, and stretch the tissues, pressure differences are created between one tissue and another. High pressure pushes old fluid and irritating metabolites into the vasculature and areas of low pressure draw in new fluid. This flushing effect may be responsible for decreasing inflammation, pain, and muscle fatigue. Massage also influences the sensory and autonomic nervous systems, inducing reflexes that decrease blood pressure, slow breathing, and improve digestion. The levels of cortisol and epinephrine decrease as the level of serotonin increases. Patients who receive massage also consistently report feeling less pain and request less pharmacologic analgesic intervention.

The body and the mind are both linked to the skin via the nervous system. Different types of touch elicit different types of mental responses. Psychologically, massage decreases stress and anxiety, produces relaxation, and improves emotional well-being. Dogs and cats lick and rub themselves and their young in response to injury and pain, so it is not farfetched to assume that they too feel the same psychological effects of massage that humans do.

Massage Techniques

Understanding the biomechanics of soft tissues is important when performing massage. Briefly, tissues of the body exhibit both viscosity, a property of fluids, and elasticity, a property of solids. Viscoelastic materials absorb energy depending on the applied rate of loading. When such materials are loaded too rapidly or with a great amount of force, their stiffness increases. This is relevant when performing massage as it is important not to load tissues too rapidly or with too much force as stiffness will increase.

Knowledge of canine and feline muscular and vascular anatomy is mandatory before performing a massage. In addition, knowing canine and feline behavior is a prerequisite for performing a successful massage session. Although each massage technique uses a certain level of pressure, the amount of pressure applied should always be individualized to the patient, ensuring patient...
comfort at all times. The therapist should also be comfortable and attend to the patient's body mechanics, choosing to perform the massage with the dog or the cat either on a padded floor or elevated on a padded table (Fig. 1). Some of the various techniques employed during a massage session are listed in the Table.

**Common Indications for Massage**

**Swelling and Edema**

A variety of conditions can cause swelling and edema. Owing to soft tissue trauma, fracture repair, immune-mediated and infectious vasculitides, and hypoproteinemia, swelling and edema can be very debilitating. Pain, immobility, poor perfusion, cutaneous wounds and infections, scarring between tissues, and a delay in recovery are often consequences of untreated edema. Many studies have shown massage to be very effective in reducing limb edema in humans and small mammals. Depending on the size of the patient and the area to be massaged, 5-minute massage sessions can be performed in the morning and afternoon until the patient's edema improves.

**Patients in the Intensive Care Unit**

Serious illnesses often lead to prolonged recumbency. Prolonged recumbency in turn often leads to a range of physical ailments. Accumulation of pulmonary secretions, reduced joint range of motion, stiffness, pain, and dependent edema can occur with prolonged immobility. These can all be ameliorated or prevented with daily massage therapy (Fig. 3). Massage has also been shown to significantly lower heart rate, blood pressure, and respiratory rate in critically ill human patients, thus increasing relaxation. Studies in preterm infants receiving massage therapy have demonstrated a decrease in pain responses, improved daily weight gain, and an increase in natural killer cell cytotoxicity. Intensive care unit (ICU) patients are also often sleep deprived because of frequent bedside visits from nurses, noise from surrounding monitoring equipment, and anxiety. Sleep deprivation can have many detrimental physiological consequences. Massage has been shown to improve the quality of sleep and to prolong the time slept in critically ill human patients. Massage seems to be a very beneficial nonpharmacologic technique that can improve the health and well-being of ICU patients.

**Osteoarthritis and Chronic Pain**

Degenerative joint disease, or osteoarthritis, is very debilitating for both humans and companion animals. Chronic joint dysfunction and pain lead to a decrease in range of motion, lameness, a decrease in muscle mass and strength, and an inability to perform activities of daily living. A multimodal approach to treating osteoarthritis, including weight and dietary management, administration of anti-inflammatory medications and analgesics, and physiotherapy, has been shown to be very effective for relieving pain associated with this condition. Physiotherapies have gained more attention as the need for long-term use of medications and their side effects prevent many patients from using them. When humans with osteoarthritis of the knee received a weekly Swedish massage during an 8-week period, their pain scores decreased significantly when compared with the scores of those patients who received a standard protocol. Even when self-massage was employed in patients with various forms of arthritis, pain scores and joint range of motion improved significantly. Massage could also benefit dogs and cats that suffer from osteoarthritis and can easily be incorporated into the multimodal treatment plan.