



A Disquisition on Hydrotherapy in Dogs

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Abstract

Canine veterinary practice has seen tremendous growth in recent times with the number of small animal veterinary hospitals/clinics constantly increasing in urban areas. Many veterinary practitioners are performing alternative treatment methods (e.g., Ayurveda, Homeopathy and Physiotherapy) besides providing routine medicinal treatment and performing surgical procedures. Different physiotherapy modalities are being used for various affections in humans; however, hydrotherapy seems to be the only physiotherapy technique which is being performed and studied more frequently in dogs as compared to other techniques. The present paper is a disquisition on some of the important aspects of hydrotherapy in dogs.

Keywords: Hydrotherapy, Dog, Disquisition

Introduction

Dog is considered as “The Man’s Best Friend” because of wide variety of reasons. It has been playing different roles in the human society such as companionship, guarding, hunting, draft/movers, stress busters, working dogs (e.g., sniffers and catchers in military/police work), assisting handicap persons etc.

The overall well-being of this companion depends on different management practices (e.g., housing, grooming, feeding, exercise, healthcare etc.) adopted by owners, breeders, trainers and keepers.

Dogs suffer from a variety of healthcare issues out of which, many infectious and non-infectious conditions affect their locomotory/musculoskeletal system either directly or indirectly. Routine physical activities, playing and exercises are of greater significance to maintain general health and wellbeing as well as behavior of dogs. Any abnormality in locomotion/movements will require rehabilitation process for which, physiotherapy is very important. Physiotherapy is a type of alternative therapy which focuses on rehabilitation by using different modalities such as ultrasound physiotherapy, laser physiotherapy, massage therapy, balance training, telerehabilitation, hydrotherapy etc.

Veterinary physiotherapy is recognized for the past 25 years for large and small animals and it is being practiced extensively in developed countries; however, it is yet to establish its roots in India (Mahaseth and Raghul, 2021). Out of all physiotherapy techniques, hydrotherapy is one of the most commonly used veterinary rehabilitation physiotherapy techniques throughout the world (Tomlinson, 2012).

Hydrotherapy

Hydrotherapy is also known as 'Aquatic therapy', 'Water based physiotherapy' or 'Aquatic physiotherapy'. It uses different characteristics of water for rehabilitation process which are required to be understood by veterinarians, paraveterinarians or hydrotherapists.

Important characteristics of water include cleanliness, depth, temperature, buoyancy, surface tension, density, warmth, viscosity, hydrostatic pressure and refraction. Each and every characteristic is having direct relation with successful outcome of a hydrotherapy session otherwise, side-effects can occur due to minor negligence. For example, chlorinated water in swimming pools may cause mild to severe side effects in dogs (Nganvongpaint and Yano, 2012). There are various bodily conditions which can affect locomotion in dogs such as fracture, arthritis, paresis, paralysis, blunt injuries, cruciate ligament rupture, osteitis, bony exostosis, hip dysplasia, some other neurological conditions etc. [(Mahaseth and Raghul (2021); Marcellin-Little *et al.* (2015)]. All of these conditions can be treated either by using medicinal drugs or surgical procedures; however, post-treatment rehabilitation is important in both cases. Hydrotherapy is indicated in many such conditions to achieve successful rehabilitation in dogs.

Considerations

Hydrotherapy should not be performed instantly in canine patients. There are certain crucial factors which are required to be considered before initiating hydrotherapy such as (a) basic understanding of characteristics of water; (b) general health checkup of dogs before hydrotherapy; (c) purpose of hydrotherapy; (d) behavior of dogs; (e) owner compliance; (f) available water sources; (g) method of hydrotherapy to be implemented ; (h) knowledge and skill of hydrotherapist etc.

Methods

Sink, bathtub, whirlpool, swim-spa, beaches, dams, lake, river, in-built swimming pools and underwater treadmills can be used to provide hydrotherapy in small animals. Selection of method/type of hydrotherapy depends on (a) purpose of hydrotherapy; (b) condition of dog; (c) complications/contraindications; (d) client's cooperation; (e) knowledge, skill and technical expertise of hydrotherapist; (f) availability of equipment etc. (Randall, 2010). Out of all methods, in-built swimming pools and underwater treadmills are more commonly preferred in dogs and both methods have advantages as well as disadvantages (Jurek and McCauley, 2009).

In all methods/techniques, dogs can be provided with different materials/equipment/toys such as floats, pool noodles, therabands, weighted straps around limbs, buoyancy vests, harness, hoist, aqua toys, steps/ramps/inclines/declines, leg weights and swim snoods (Tomlinson, 2012).

Benefits

Hydrotherapy results in many benefits such as (a) relaxation of joints and muscles; (b) pain relief; (c) increased tolerance of dogs against pain; (d) improved muscle strength and endurance; (e) improvised efficiency of certain internal organ functions; (f) reduced stress; (g) reduction in edematous swelling; (h) increased speed of post-operative rehabilitation etc. (Waining *et al.*, 2011).

Care/Contraindications

Despite having certain benefits, hydrotherapy should be avoided in case of (a) open/infected wounds; (b) dogs with unhealed surgical incisions/suture lines; (c) active gastrointestinal diseases; (d) systemic infections/illnesses; (e) uncontrolled epileptic seizures; (f) respiratory compromises; (g) active ear infections; (h) chronic dermatological disorders etc. (Randall, 2010).

There is no standard established guideline on duration and frequency of hydrotherapy in different conditions affecting locomotion in dogs. Veterinarians can prefer literature from other countries and apply them in day-to-day practice until a large-scale research-based data is not available. Moreover, pre- and post-hydrotherapy comparison of dog's condition (while standing,

walking, jumping etc.) is very important which can be achieved by use of physical examination, videography and by use of software (Marsolais *et al.*, 2003).

Conclusion

Hydrotherapy is very useful for rehabilitation in dogs; however, it is yet to be explored on various grounds in canine practice in India. Basic or advanced and applied research should be encouraged for scholars in veterinary medicine and veterinary surgery subjects at academic institutions. Research-based material should be generated and short-term training courses can also be developed along with practical exposure so that this rehabilitation technique can be effectively implemented in canine practice throughout the country.

Conflict of Interest

Authors declare no conflict of interest with special regards to funding.

Acknowledgments

Authors acknowledge staff of PGIVER; authorities of Kamdhenu University, Gandhinagar; staff of Sharda College of Physiotherapy, Gandhinagar.

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	Website: www.ijarbs.com
	Subject: Veterinary Sciences
Quick Response Code	
DOI: 10.22192/ijarbs.2021.08.08.015	

How to cite this article:

C. M. Bhadesiya, J. C. Bhadesiya and D. V. Patel. (2021). A Disquisition on Hydrotherapy in Dogs. *Int. J. Adv. Res. Biol. Sci.* 8(8): 136-138.
DOI: <http://dx.doi.org/10.22192/ijarbs.2021.08.08.015>