

November - December 2019

BULLETIN OF THE

PET PRACTITIONERS ASSOCIATION OF MUMBAI.

(For Circulation amongst PPAM Members)



Editorial

New Year Resolution- to involve younger generation more and more in PPAM activities.

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Wishing all the PPAM members a very happy 2020. The previous year 2019 was indeed memorable with various programmes and CE organised by PPAM including the 11th FSAPAI CE and 18th World Small Animal Veterinary Association (WSAVA) Continuing Education (CE) Program on 22nd to 24th November 2019.

In this New Year let us indulge in retrospection and re-evaluating of our PPAM activities and involve the younger generation. New Year's resolutions are the perfect opportunity for all those who have yet to start making the changes that they said they would make next week, next month, or perhaps when next season starts.

Well, now's its our chance to sit down and prepare a list of important changes we want to make, and being the charitable and caring bunch that we are here at PPAM. To keep PPAM growing and progressing we must follow what Albert Einstein said

"Life is like riding a bicycle. To keep your balance, you must keep moving."

Younger generation have a reputation for being tough to

engage. However, this doesn't mean we should give up on getting them involved in our organization, as they can be a key part of any event and fundraising strategy. After all, the average millennial is incredibly well-connected and many young people in PPAM have had experience with non-profits organization in one way or another.

At PPAM after the youngsters are involved it is necessary to be flexible as life of today's youngsters is pretty hectic. If we do involve young volunteers, make sure PPAM is flexible about scheduling. A millennial is much more likely to get involved if he or she has control over when the work occurs.

IF NOT DELIVERED,
PLEASE RETURN TO

The Secretary, PPAM.
Shop No. 1, Bramhandev CHS,
Padmabai Thakkar Road,
Shivaji Park, Mahim,
Mumbai 400 016.



Dr. S. V. Vishwasrao
Ph.D. (Surgery),
Editor, PPAM Bulletin.
vishwasraodr@hotmail.com
Mobile - 9322242184

Let us all get down and prepare a plan for future and involve each and every PPAM member in designing the future of PPAM. Once a short term or long-term plan is prepared let us all execute the plan. Henry Ford has said “Vision without execution is just hallucination.”

Getting younger generation involved can benefit PPAM in many ways—from networking, to the feel-good aspect of volunteering, to developing lasting personal and professional relationships. Young PPAM members should not only volunteer but actively participate in all the PPAM functions, so that they are not mere observers but active volunteers. If our young members really want to get to know people and showcase their own abilities they must get involved, serve on a committee, volunteer for an event, and/or become a committee member. These activities build long-lasting relationships and potential opportunities to grow further.

Regardless of one's objective, becoming involved in any organization is about developing meaningful relationships from which we all will learn and hopefully grow in all aspects of our professional life. Active

volunteering means a commitment of personal time and resources. A lot of young veterinarians want to be taken seriously and given responsibility. We at PPAM must ask them to contribute based on their unique skills and interests it can help them feel wanted and needed. We at PPAM will not just put out a general call for volunteers but personally ask younger veterinarians to help out in areas that we know match their interests.

Smaller working group will help young veterinarians' bond with each other by removing participation barriers that can exist in intimidating, large group settings. Getting senior or more experienced veterinarians involved in each group will also foster natural mentorships between veterinarians.

The bottom line is that consistent and active involvement is the key to successfully developing relationships. In short, getting involved in PPAM activities can arm our youngsters with many of the skills required for future veterinarians. Tomorrow's PPAM leaders need to be equipped for tomorrow's challenges, and we must adequately prepare our younger veterinarians for the future they will inherit.

Laser Therapy in Companion Animal Practice

Dr. Aziz D. Bate

M.V.Sc (Surgery), Member of AIMLA (USA)
Director Zinnia Pet Care Veterinary Surgical And Medical Care
Centre, Mira Road (east), Thane 401107.

Introduction

Presently, Laser Therapy is being used worldwide. Laser and Phototherapy equipments have become a routine procedure within the application of physiotherapeutic treatment regarding pain management, wound healing and an anti-inflammatory mediator. There is a lack of information on therapeutic lasers upon which therapist apply to clinical situation. Therefore, the purpose of writing this article is to satisfy the need for a clinical manual with respect to the companion animals.

The goal of all therapeutic modalities pertaining to companion animal is to provide best possible care. Application of laser therapy is powerful tool in providing that care through a relief of pain and swelling, as a local and systemic anti-inflammatory mediator, as a superior method of healing wound or injuries, as a stimulation of acupuncture points (needleless acupuncture) and as a solution to many persistent dermatological disorders. Long recovery period and extended treatment times will soon be a thing of past.



In this article we will be discussing about mechanism of action, treatment parameter, indications, contra-indication, benefits in clinical practice and clinical cases.

The proper use of lasers to companion animal patients is a therapy of future. I hope that the information provided with in the article enables us all to provide a better quality of life to our constant loyal companion.

What is LASERS ?

The term LASER is an acronym for :

Light
Amplification by
Stimulated
Emission of
Radiation

By definition a LASER is "Any device which can made to produce or amplify electromagnetic radiation in the wavelength range from 180nm to 1mm primarily by the process of controlled stimulated emission".

What is Photo-stimulation Therapy or Laser Therapy ?

"Application of Electromagnetic radiation within the red and infrared spectrum over the injuries and lesion to stimulate healing and pain relief within those tissues".

Mechanism of action

For tissue to absorb light and alter its physiological, photochemical or photobiologic event must occur. Ideally this event would take place within the target tissues, whether it be skin, muscles, fascia, nerves, vessels, bones and/or joints. A "photoacceptor" molecule, also known as a "chromophore" responds to light by initiating a series of physiological response that engender healing and improved tissue homeostasis. When a chromophore (such as cytochrome c oxidase in the mitochondria respiratory chain) absorbs a photon from laser-treated tissue, an electron within the chromophore becomes excited and jumps from low to high energy orbit. This increased electron energy provides the impetus for the system to perform cellular activities geared toward growth and repair.

The effect of laser on mitochondria, cells and tissue is called "photobiomodulation". This collective process encompasses not only the effects of lasers but also those of light-emitting diodes (LEDs) and other light sources. Light therapy also causes vasodilation by relaxing endothelial smooth muscle, likely through nitric oxide mechanisms. Vasodilation improves tissue oxygenation and support the migration of immune cells into tissue, further aiding recovery.

Treatment Parameters

Many factors impact how light influences tissue, including its power, wavelength, strength, pulse characteristics, tissue contact, and the nature of its beam. As indicated above, photobiomodulation entails changes at the subcellular, cellular, and tissular levels. Within the mitochondria, activated photons engender increases in production of ATP, modulation of reactive oxygen species, and induction of transcription factors. These factors encourage cell proliferation and migration, normalized cytokine levels, enhanced production of growth factors, modulated levels of inflammatory mediators, and improved oxygenation of tissue.

Dose:

The specific dose(s) of laser required to heal tissue and treat pain remains unclear. Calculating actual joules of energy delivered requires calculations of considerable complexity. Fortunately, a wide range of doses shows benefit for people and experimental animals, despite the wide variety in size, color, and hair coat.

Wavelength:

Most therapy units use red or near infrared light, from 600 nm to 1070 nm. This range constitutes the "optical window" wherein effective absorption into tissue is maximal. That said, units with green, blue, and violet light (~400 nm range) are becoming more popular. Visible light ranges from 390 to 760 nm, progressing from violet to blue, green, yellow, orange, and red at 600 nm.

The types and depth of tissue that respond to light therapy depend on the wavelength delivered. Certain molecules, such as melanin and hemoglobin, preferentially absorb light in the 600 nm range. To reach deeper tissues, wavelengths (810 nm, 980 nm) that absorb less in superficial tissue can be used, leaving more light to reach for deeper sites such as bone, the brain, and internal organs.

Certain laser therapy units emit two or more beams to target a variety of tissues.

Laser beams differ from other types of light therapy, including LEDs, by being monochromatic (existing within a narrow band of wavelengths), coherent (tightly aligned), and collimated (photons travel in parallel). The more light scatters within tissue, the less intense the biologic impact, which may or may not be the desired outcome. However, debate continues about the relative value and differences between laser light and LEDs.

Clinical Application

Laser therapy is being used in treatment of various clinical indications for faster recovery :

- MUSCULOSKELETAL DISORDERS
 - ✦ OA
 - ✦ IVDD
 - ✦ TRAUMA
- Post Surgical Pain Management
- Rehabilitation Applications
- Geriatric
- DERMATOLOGY (LICK GRANULOMA, PYOTRAUMATIC DERMATITIS)
- Otitis
- LAMENESS
- DENTAL
- Abdominal/thoracic disorders

Contraindication

Contraindications to direct laser treatment include carcinoma, thyroid gland, active hemorrhage, and autonomic nerve centers. Laser therapy should be avoided in patients in which immune stimulation is not desired, including those with lymphoma or on immunosuppressant medications. In immature patients, higher powered laser therapy devices may stimulate premature closure of epiphyses. Thus, caution is warranted over long bones in animals <1 yr old.

Benefit that Laser Therapy can bring into Clinical Practice

- Deep, soothing laser therapy provides a drug-free option (in certain cases) for the enhanced patient care.
- Provides your Patients with an Advanced and Effective Healing Modality.
- Provides you with a new options to Chronic Problems such as IVDD and Lick Granulomas.
- Provides a new Income sources to the Practice without Cannibalizing other Practice Income sources.

Clinical Cases

Case 1 :Day 1: 6 months Old female Pit Bull

Presented 24 hours after trauma to left rear leg. Medial aspect of leg was sliced to bone with severe injury to muscle, tendon, ligaments and joint capsule of hock. Tip of tail was sheared (ref picture 1)

Wounds were treated on days 3, 4, 7, 10, 15, and 17 due to owners lack of compliance with recommendations.

DOSAGE: 4000J/TX

I WOULD NORMALLY EXPECT A WOUND OF THIS NATURE TO TAKE TWO TO THREE MONTHS TO HEAL RATHER THAN ONE MONTH."

DR. AZIZ D. BATE.



Case 2 : DOG : TIGER 10 YEARS OLD BOXER

NON HEALING WOUND AT THE BASE OF EAR AND ALSO OTITIS.

Treatment progress from Day 1, Day 10 and Day 15



Case 3 : DOG—SWEETY AGE 15 MONTHS OLD LAB. Diagnosis IVDD

History of sudden paralysis before and 1 month after treatment.



Case 4 : Dog Snoopy 3 yr old pom

Sever cellulitise before and after treatment Day 1 and Day 7



Case 5 : Dog Suzi, 6 Month Old, Mix Breed

Treatment progress from Day 1, 5 and Day 10



About Author :

Dr. Aziz D Bate ,Graduated from Bombay Veterinary College, Post Graduated in Veterinary Surgery with Frist Class with Distinction Gold medalist from SDAU Gujrat. Pioneer laser therapist in India , First Indian to Become Member of AIMLA (U.S.A.), Member of BSAVA (U.K.), Presently working as a Director of Zinnia Pet Care Veterinary Surgical And Medical Care Centre And Also Incharge of Laser Cure Centre in Mira Road since last 2 decades.

Add : G/001-S5, Ritu fame Ritu Paradise, Phase 1, GCC road, Mira Road (E), Thane—401107, Maharastra, India.

E-mail : docaziz17@yahoo.com

Phone : 8657251891/92

Climate Emergency

Dr. Meher Abadian

We are in a state of emergency and we are not taking it seriously.

On the brink of what is the Sixth Mass Extinction, do we feel justified by just talking about the crisis we are going through? With our eco systems collapsing, and the slow extinction of our precious wild life, you will agree that climate change and global warming are not terms or words that belong to text books.

The climate is changing, it's real, and the scientists have been reporting it since 1979 at the First World Climate Conference in Geneva.

Let's consider a day in our lives, are we consuming more than we require? Are we buying things we do not need? Are we choosing to use plastic over environmentally friendly options every day? If so, we are ignoring our environment and causing further damage to what little we have left.

Human beings are depleting the natural resources faster than nature is capable of restoring it.

We have only one planet, and if we do not take care of it, the future generations will be left with nothing, we forget a very important fact that is 'We need Nature, Nature doesn't need us'.

In 2000 our scientists had predicted the flash floods in Europe, the wild fires in Australia; and floods and hurricanes in South East Asian countries that we are currently facing. What does it take for us to listen, and learn when the signs are all around us?

The Australian wildfires with flames engulfing innocent animals, the hurricanes constantly hitting Phillipines and Japan, and Indonesia currently submerged under water, we have brought this helish situation upon ourselves even after being warned about it.

Human activity, post Industrial Revolution, has dangerously disrupted the earth's equilibrium due to the build-up of excess greenhouse gases (water vapour, carbon dioxide, methane, nitrous oxide, and ozone) in the atmosphere. We are already at a 1.1C global temperature rise, and the IPCC 1.5C report from last year, predicts that we will reach the 1.5 degree warming by around 2040. But some reports predict we will be reaching this level by 2030 itself.

The rise in temperature causes the ice in the Polar Regions to melt. And when ice melts, we all know where the water goes. We already have sea water levels rising in places like Bangladesh and islands in the Pacific like Kiribati disappearing. Let alone the reports that have recently come out regarding Mumbai being underwater by 2050.

Last year in India alone more than 2 lakh people were displaced due to floods, while parts of India were affected by droughts. These were the records prior to Cyclone Bulbul hitting West Bengal, incurring a total loss of Rs. 23,811 crore and over 35 lakhs plus people directly affected.

Monsoons were longer than expected, and we were not prepared. Not being prepared for climatic changes is a cause of great concern. Unprecedented Monsoons have damaged food crops, causing onion prices to soar, this is only the beginning of what is in store for us.

The locust swarm in Gujarat on 27th December 2019 was caused due to change in wind directions, damaging 12000 acres in one district alone, this is going to cause an increase in prices of other staples.

The ground water depletion in Haryana and Punjab are leading to less crop production, and less yield, hence price hikes.

Delhi is experiencing the coldest winter in recent history with unprecedented levels of pollution, leading to irreversible lung damage in children and adults.

The destruction of Biodiverse Hotspots here in India is a cause of concern along with the constant extraction of coal from our land. The extinction of species in these hotspots causes an imbalance in eco systems, leading to desertification and a direct impact on the climate, but we are not talking about this.

What can we do about this existential crises we are in? Individually we need to become more aware of our daily habits, and reducing our carbon footprint is a step towards reducing our carbon emissions. Recycling, Composting, Using less/no plastic in our daily life, using public transport, walking more, these are small steps we as individuals can take.

Along with this we need policy changes to protect our forests and our oceans. The Cop 25 meet this year held by the UN was a fail with the politicians walking out with no solid solution, instead playing the blame game amongst each other. India says they are converting to clean renewable source energy, but they are not considering taking a step back in the dirty coal energy we are still using. Our forest cover is constantly declining under the notion of 'development'. What is the use of all this development when floods wreck havoc, we become climate refugees with no place to call home and food so expensive we will not be able to afford.

We need a plan, we need to declare a Climate Emergency, and consider this as the most important step we need right now. Preserve our forests and keep the fossil fuels in the ground, maintain our eco systems, bring back our mangroves, invest in better systems for weather prediction and most importantly we need 'Sustainable Development'. We need to start talking about the Climate Crises we are in and make this our top most priority, because we are just not doing enough.

We are in a state of emergency and we all need to take it seriously.

High lights of the 11th FSAPAI CE and 18th World Small Animal Veterinary Association (WSAVA) Continuing Education (CE) Program on 22nd to 24th November 2019.

FSAPAI CE - WSAVA CE Report

11th FSAPAI CE on Companion Animal Practice & 18th World Small Animal Veterinary Association Continuing Education (WSAVA CE) program was successfully held at Hotel Grand Hyatt, Santacruz, Mumbai during 22nd, 23rd, 24th November 2019.

This grand event was attended by 846 veterinarians. Forty one Corporate Booths were part of Exhibition Arena. More than 300 Corporate personnel were present.

Diamond Sponsor: Royal Canin. **Platinum Sponsor:** Mars, PCG & Drools.

For the first time India, WSAVA CE was held with 3 parallel streams with following speakers. There were 5 Key Foreign Speakers and 8 top Indian Speakers. In total, 13 world class speakers addressed to a very focused and enthusiastic crowd of vet participants.

Cardiology: Key Speaker: Dr. Larry Tilley (USA), Indian Speaker Dr. Sangeeta V. Shah, Dr. K. Jeyaraja .

Orthopaedic Surgery: Key Speakers : Dr Bruno Peirone (Italy), Dr. Daniel Damur (Switzerland), Dr. Matthias Frank (Germany), Indian Speaker Dr. C. C. Wakankar, Dr. Milind Hatekar

Avian Medicine & Surgery: Key Speaker : Dr. Lorenzo Crosta (Australia), Indian Speakers

Dr. Nihar Jayakar, Dr. Amrita Deb, Dr. Shivani Tandel, Dr. Rina Dev.

We received very positive feedback from all participants as well as sponsors. Next year FSAPAI CE-WSAVA CE will be held in November 2020 at Guwahati, Assam, India.







