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Pet Practitioners Association of Mumbai

(FOR CIRCULATION AMONGST PPAM MEMBERS)

Bombay Veterinary College 140th Foundation Day Celebration (1886-2025)

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INDIAN PET INDUSTRY AWARDS

Dr. Omkar Pawaskar

Dr. Vikram Niratle
Swacha Sarvekshan Award

Dr. Pradip Chaudhari
IAVC 2025-Hong Kong

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Editorial

Balancing Animal Welfare with Public Safety and Hygiene

"Sarve bhavantu sukhinaḥ, sarve santu nirāmayāḥ…"

(सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामयाः ।
सर्वे भद्राणि पश्यन्तु मा कश्चिद् दुःखभाग्भवेत् ॥)

Translation: May all beings be happy, may all be free from disease, may all see auspiciousness, may none suffer.

(From the Bṛhadāraṇyaka Upaniṣad)
(The "sarve" includes all living beings—humans, animals, even unseen creatures).

In today's society, animal welfare has become an integral part of our moral and social responsibility. At the same time, the safety and hygiene of the public cannot be compromised. The challenge, therefore, is not to view these as opposing concerns but to strike a balanced approach where compassion towards animals coexists with the protection of human health and public spaces.

History gives us inspiring examples of such coexistence. Emperor Ashoka's edicts in the 3rd century BC promoted compassion towards all living beings, encouraging medical care for both humans and animals.

1. The Need for Balance

Animal welfare emphasizes preventing cruelty and ensuring food, shelter, and medical care for animals. Public safety focuses on preventing zoonotic diseases, animal bites, and accidents. Public hygiene deals with cleanliness of shared spaces and prevention of contamination. Balancing these three requires careful planning and cooperation among communities, local authorities, and veterinary professionals.

2. Practical Measures

- Animal Birth Control (ABC) and Vaccination: Regular sterilization and rabies vaccination programs help control stray animal populations and safeguard against disease.
- Designated Feeding Zones: Feeding strays in fixed areas away from hospitals, schools, and traffic zones prevents conflict and ensures hygiene.
- Waste Management: Proper garbage disposal reduces scavenging by animals and improves public cleanliness.
- Shelter Homes and Adoption Drives: Providing alternatives for strays reduces their presence in sensitive public spaces.

3. Legal and Ethical Framework

Animal cruelty is punishable under law, but negligence in protecting public health is equally unacceptable. Clear municipal guidelines can create accountability– such as mandatory vaccination and registration of pets, and responsibility for community feeders to maintain cleanliness.

4. Public Awareness and Sensitization

Education is vital. Schools, residential societies, and community groups must be sensitized to interact safely with animals, understand the importance of sterilization and vaccination, and learn first aid for animal bites. Awareness fosters empathy while ensuring caution.

Conclusion: Animal welfare and public safety are not conflicting goals but complementary responsibilities. A scientific, humane, and cooperative approach–rooted in vaccination, sterilization, hygiene, and education–can ensure that both people and animals thrive together in a safe, clean, and compassionate environment. As Mahatma Gandhi reminded us, "The greatness of a nation and its moral progress can be judged by the way its animals are treated." This thought should guide us in creating societies where both humans and animals coexist with dignity and safety.

We as Pet practitioners must Educate Animal lovers/ Pet owners the following Do's and Don'ts.

Do's

- Vaccinate regularly and sterilize your pets.
- Feed stray animals only at designated or safe spots.
- Clean up the area after feeding animals.
- Report injured, sick, or aggressive animals to local veterinarian/authority/NGOs.
- Teach children safe and respectful ways to interact with animals.

Don'ts

- Do not abandon pets on the streets.
- Do not encourage stray animals to gather near hospitals, schools, or crowded public places.
- Do not leave garbage in open areas–it attracts animals and spreads disease.
- Do not provoke or harm animals; cruelty is punishable by law.
- Do not ignore animal bites–always seek medical attention immediately.

Dr. Shriniwas V. Vishwasrao
Editor, PPAM Bulletin

Treatment and Management of an Adult Alexandrine Parrot (Psittacula eupatria) with Neurological Impairment Using Integrated Therapeutic Modalities

Dr. Deepa Katyal

Introduction: An adult male Alexandrine parrot *(Psittacula eupatria)*, weighing approximately 180 grams, was rescued from beneath a stationary vehicle in Chembur, Mumbai, and subsequently presented to Dr. Deepa Katyal's veterinary clinic, Animal Wellness & Rehabilitation Centre. The bird exhibited signs consistent with ataxia and severe incoordination, indicative of neurological compromise.

Clinical Report: Upon admission, the patient demonstrated a markedly unstable gait with impaired motor coordination. Body condition assessment revealed underweight status and pronounced pectoral muscle atrophy. Rectal temperature was normal, registering at 105°F.

Hydration and nutritional parameters indicated dehydration and malnourishment. Plumage assessment showed dull, drab, and discoloured wing feathers with complete loss of tail feathers. Functional evaluation of the wings revealed normal extension and retraction capabilities.

Oropharyngeal examination was unremarkable, with no pathological discharge noted from the eyes, nares, or choanal opening. No ectoparasites were identified upon external inspection.

The peri cloacal region presented with adherent dry fecal material, although fecal consistency was otherwise normal. Vocal response was absent during routine handling, with the exception of vocalization elicited at palpation of the vent area. Further inspection revealed a discrete blood clot with associated tissue inflammation surrounding the vent.

Supportive Management & Nutritional Intervention: The patient was administered Emeraid Intensive Care Omnivore, a specialized nutritional supplement for avian species. Due to anorexia, force-feeding was initiated with a dosage of approximately 2 mL every three hours over the first 24 hours. Nutritional support was continued for a total duration of five days. Upon achieving adequate weight gain and clinical stabilization, the patient underwent magnetic resonance imaging (MRI) to investigate neurological status.

Diagnostic Evaluation: Approximately 1 ml of whole blood was obtained via jugular venipuncture for hematological and biochemical analysis.

- **Hematology:** Hemoglobin and red blood cell (RBC) counts were within physiological limits, with WBC levels measured at 35 × 10^3/µL, noted to be elevated compared to typical reference ranges.
- **Biochemistry:** Parameters including alanine aminotransferase (ALT), creatinine, and uric acid were within normal limits. The limited sample volume restricted further biochemical profiling.
- **Fecal Analysis:** Stool examination showed no abnormalities.
- **Radiography:** Whole-body radiographic imaging revealed no structural or internal abnormalities.

Imaging & Anesthetic Protocol: Magnetic Resonance Imaging (MRI) of the brain and spinal cord was performed under general anesthesia utilizing a multimodal protocol:

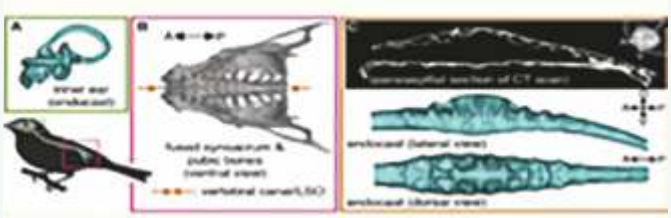
- Butorphanol at 0.8 mg/kg
- Midazolam at 1 mg/kg
- Ketamine at 10 mg/kg

The procedure was uneventful, with no complications noted during induction, maintenance, or recovery. The patient regained consciousness without incident post-imaging.

MRI Findings:

- **Brain:** No structural abnormalities were detected on neuroimaging.
- **Spinal Cord:** Inflammatory changes were observed localized to the lumbosacral spine, specifically at the L4 to S2 vertebral levels, suggestive of myelitis or other inflammatory pathology affecting that region.

Therapeutic Management: A prophylactic antibiotic regimen was initiated with oral doxycycline at a dose of 25 mg/kg once daily for 3 consecutive



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Birds are hypothesized to have two sets of balance organs, one in the inner ear (A) (common to terrestrial vertebrates) and a second within the synsacrum (B), termed the lumbosacral organ (LSO). The LSO is housed within an expanded vertebral canal, which exhibits a set of canal-like recesses (lumbosacral transverse canals [LSTCs]; C).

days, co-administered with the avian-specific probiotic formulation *Setgut* to support gastrointestinal health and microbiota stability.

Nutritional and hepatoprotective supplementation included Vetrivet Avian: standard avian support formula & Milk Thistle: administered at 0.1 mL, thrice weekly to aid hepatic function

Pain Assessment and Management Protocol: Given the absence of a universally standardized avian pain scale, a multi-modal approach combining behavioural and physiological parameters was employed to evaluate pain in this Alexandrine parrot. Observational criteria included posture abnormalities, reduced activity levels, vocalization patterns, and vital signs such as heart and respiratory rate–all of which remained within normal limits for the species.

Post-evaluation of pain, a multimodal analgesia plan integrating both pharmacologic and non-pharmacologic approaches was formulated and implemented to ensure effective pain control and improved recovery outcomes.

Pharmacological Intervention: To manage pain effectively, the following analgesic regimen was implemented over a three-day period:

- Meloxicam: Administered intramuscularly at a dosage of 0.8 mg/kg once daily for its anti-inflammatory and analgesic properties.
- Gabapentin: Administered orally at a dosage of 10 mg/kg every 10 hours, three times per day, targeting neuropathic pain symptoms and providing sustained analgesia.

An integrative pain management plan combining both pharmacologic agents and supportive non-pharmacologic measures ensured comprehensive analgesia throughout the acute phase of recovery.

Integrated Pain Management – Non-Pharmacological Interventions: In addition to pharmacological analgesia, the patient received adjunct non-pharmacological therapies aimed at modulating pain and promoting tissue recovery.

Photo biomodulation Therapy (PBMT): Low-level laser therapy was administered once daily utilizing the "Deep Trauma Wound" preset protocol. The therapy targeted the pygostyle and synsacrum region with the following parameters:

- Duration: 4 minutes
- Pulsed frequency: 20 Hz
- Energy delivery: 120 joules
- Application method: Non-contact fanning technique
- Coverage area: Approximately 5 × 7.5 cm

This protocol aimed to reduce inflammation, stimulate cellular repair, and alleviate nociceptive signalling at the affected site.

Acupuncture Therapy: A curated acupuncture regimen was employed using points selected for their neuromodulatory and systemic regulatory properties:

- ST36 (Zusanli): Known for broad therapeutic benefits, particularly immunomodulation and general condition stabilization
- GV1 (Changqiang): Targeted for its efficacy in treating regional injuries and lumbosacral dysfunction
- LI11 (Quchi): Used to modulate autonomic imbalance and support homeostatic regulation

These integrative modalities were selected based on the patient's neurological presentation and response to tactile stimuli, contributing to a multimodal pain management strategy.

Clinical Outcome: Following the initiation of the treatment protocol, the adult male Alexandrine parrot demonstrated notable clinical improvement. The previously observed uncoordinated gait has partially resolved, with enhanced postural control and balance. The bird has resumed voluntary feeding, eliminating the need for assisted nutrition. Although ambulation remains mildly compromised, functional mobility has improved, and the patient has exhibited measurable weight gain.

Pharmacological therapy, including oral medication, was discontinued after three days. The current regimen comprises ongoing nutritional supplementation and continued integrated non-pharmacological interventions (photobiomodulation and acupuncture). Based on the encouraging clinical trajectory, the existing management plan will be maintained, with close observation to monitor further progress.

Discussion: Birds (Aves) exhibit exceptional and diverse locomotor behaviours, including the ability to balance on two feet. How birds so precisely control their movements may be partly explained by a set of intriguing modifications in their lower spine. These modifications are collectively known as the lumbosacral organ (LSO) and are found in the fused lumbosacral vertebrae called the synsacrum. They include a set of transverse canal-like recesses in the synsacrum that align with lateral lobes of the spinal cord, as well as a dorsal groove in the spinal cord that houses an egg-shaped glycogen body[1].

Lumbosacral Transverse Canals: These additional canals, found in some bird species, are thought to be involved in a secondary balance mechanism. Research suggests these canals, along with the lumbosacral spinal cord's dorsal groove and glycogen

body, constitute the "lumbosacral organ". The canals' potential role in balance is supported by their similarity to the semicircular canals of the inner ear, which also play a key role in balance. Lumbosacral Transverse Canals: (Based on compelling but primarily observational data, the most recent functional hypotheses for the LSO consider it to be a secondary balance organ, in which the transverse canals are analogous to the semicircular canals of the inner ear. If correct, this hypothesis would reshape our understanding of avian locomotion, for which study is ongoing).[1]

Possible Function: The lumbosacral organ is hypothesized to be a mechanosensory organ, detecting changes in limb position and movement to aid in maintaining balance during walking and other activities. This is particularly important for birds, as they have a centre of gravity positioned in front of their hindlimb's insertion point, requiring precise balance control.

Several hypotheses have been put forward for the function of the LSO and its various components, but detailed understanding of this remarkable specialization remains elusive. For instance, a frequent—and perhaps the most obvious—functional hypothesis for the glycogen body is that it is used for energy storage, but this hypothesis is not supported by all experimental evidence.2. recently, the LSTCs and accessory lobes have been interpreted as having a mechanosensory function3, reasoned that rotations of the body induce flow of cerebrospinal fluid within the transverse canals, stimulating neurons of the accessory lobes 3. This may help birds maintain balance, although strong electrophysiological and behavioural evidence in support of this hypothesis is still needed.

Summary: Although mechanosensory neurons have been identified in the vertebrate spinal cord and shown to have locomotor function, the avian spinal cord at the LSO remains mysterious. Determining the locations and identities of mechanosensory cells of the spinal cord and their responses to the relevant mechanical stimuli, including cerebrospinal fluid motion and tissue vibration, will help distinguish these hypotheses. Further, the putative neural circuitry of the LSO may function locally within the spinal cord and/or project to the cerebellum, which is known to receive balance information from the inner ear and contribute to calibration and coordination of movement.4 It is important, however, to note that all hypotheses of LSO function lack conclusive evidence, and many should still be considered until some of these knowledge gaps are filled with more research. In this case, the bird (since history was not available) probably suffered trauma at its rear end affecting its balance mechanism. Integrated management involving phototherapy and acupuncture remains largely undocumented in avian clinical literature for cases exhibiting neurological dysfunction such as ataxia and movement incoordination. However, in this case, notable improvement in gait stability, postural control, and voluntary feeding behaviour has been observed following implementation of these adjunct therapies. In light of the positive clinical trajectory, continuation of photobiomodulation and acupuncture is planned as part of the ongoing multimodal rehabilitation strategy.

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Breed-specific Dermatological Challenges in Shih Tzu's

Dr. Anisha Tiwari, M.V.Sc.

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Abstract: Shih Tzus are a popular breed known for their distinctive coat and brachycephalic features, both of which contribute to a unique predisposition to dermatological disorders. The most common dermatoses affecting Shih Tzus include atopic dermatitis, seborrheic conditions, pyoderma, Malassezia Dermatitis, follicular dysplasia, intertrigo, otodectes mites, and traction alopecia. These conditions are often complicated by the breed's dense double coat, prominent skin folds, and altered immune responses. Clinical presentation can vary from pruritus and chronic otitis externa to alopecia and secondary infections. Accurate diagnosis requires a combination of dermatologic history, cytology, skin

Figure 1. *Atopic Shih Tzu with chronic allergic dermatitis, including mild to moderate alopecia, erythema, lichenification, and accumulation of keratosebaceous debris on the ventral neck, chest, dorsal elbow and paws.*

scrapings, otoscopic examination and, in some cases, allergy testing. Breed-specific factors such as grooming frequency, facial anatomy, and genetic predispositions must be considered when developing treatment plans. Early recognition and targeted therapy are crucial to improving outcomes and quality of life for affected dogs.

Dermatoses in Shih Tzus:

Introduction

Shih Tzu, a brachycephalic toy breed well known for its coat, compact body, and prominent skin folds. These features predispose the breed to a range of dermatological issues. Dermatoses in Shih Tzus can be challenging to diagnose and manage due to overlapping symptoms, chronicity, and breed-specific anatomical traits. Skin disorders in this breed involve a combination of allergies, infections, and conformational characteristics such as facial folds and compact ear canals. Common conditions include atopic dermatitis, seborrheic disorders, otodectes mites, traction alopecia, bacterial and fungal infections, and follicular dysplasia.

Atopic dermatitis in Shih Tzus

Atopic dermatitis (AD) is one of the most commonly diagnosed skin conditions in Shih Tzus, resulting from an inherited hypersensitivity to environmental allergens such as pollen, dust mites and mould. This immune-mediated condition is characterised by chronic pruritus and skin inflammation.

Clinical Signs

- Greasy or flaky coat, especially on the back, ventral neck, and face
- Unpleasant odour (especially with seborrhea oleosa)
- Thickened, scaly skin
- Recurrent skin infections
- Pruritus may or may not be present

Seborrhea often overlaps with other dermatoses, making diagnosis and treatment more complex.

Diagnosis

- Skin scrapings and cytology: rule out parasites or secondary infections
- Thyroid function tests: rule out hypothyroidism
- Histopathology (in chronic or severe cases)
- Breed and age considerations support the diagnosis of primary seborrhea

Treatment

- Topical therapy: keratolytic shampoos (e.g., containing sulfur, salicylic acid, or benzoyl peroxide)
- Fatty acid supplementation
- Retinoids or cyclosporine (for refractory cases)
- Antimicrobials: if secondary bacterial or yeast infections are present

Malassezia Dermatitis

Malassezia pachydermatis is a yeast organism commonly found on canine skin but can overgrow in warm, moist, or immunocompromised conditions. Shih Tzus are prone to Malassezia overgrowth due to their dense coats, occlusive skin folds, and a history of underlying allergic skin disease.

Figure 2. *Chronic otitis externa in a Shih Tzu showing erythema, accumulation of pus*

Clinical Signs

- Intense pruritus
- Greasy, smelly skin (often described as "rancid" or "yeasty" odour)
- Red, inflamed skin — particularly in folds, ears, and interdigital spaces
- Chronic otitis externa
- Thickened skin in chronic cases

Diagnoses

- Cytology: impression smears or tape preps showing peanut-shaped budding yeast
- Response to treatment often helps confirm the diagnosis.

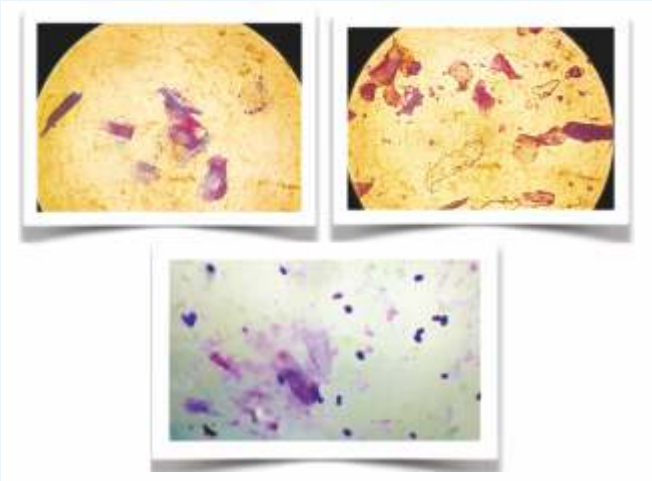


Figure 3. *Impression smear showing peanut-shaped yeast*

Treatment

- Topical antifungal shampoos: miconazole, ketoconazole, chlorhexidine with antifungal agents
- Systemic antifungals: itraconazole or ketoconazole for more severe or generalised cases
- Control of underlying disease, such as atopic dermatitis or seborrhea

Prognosis

When underlying causes are identified and managed, the prognosis for Malassezia dermatitis is excellent. However, recurrence is common if primary conditions are not controlled.

Follicular Dysplasia in Shih Tzus

Follicular dysplasia is a genetic disorder affecting the hair follicle, resulting in abnormal hair growth, structural defects, and alopecia. In Shih Tzus, it may appear as part of colour dilution alopecia, pattern baldness, or other hereditary alopecic syndromes. While not typically pruritic, follicular dysplasia is often misdiagnosed as endocrine alopecia or chronic skin disease.

Clinical Signs

Symmetrical hair thinning or bald patches, especially on the flanks, neck, or dorsal midline

- Dry, dull coat with increased scale or follicular plugging
- Hyperpigmented or thickened skin in chronic cases
- Minimal to no itching unless a secondary infection occurs

Diagnosis

- Trichography (microscopic hair shaft analysis)
- Skin biopsy: definitive diagnosis
- Ruling out endocrine or nutritional causes is essential

Management

There is no cure, but the condition can be managed with:

- Topical therapy: moisturising or keratolytic shampoos
- Fatty acid supplementation
- Avoidance of harsh grooming practices

Prognosis

While follicular dysplasia is not life-threatening, its cosmetic appearance and potential for secondary infections can significantly impact quality of life. Long-term skin care and gentle grooming help maintain healthy skin.

Intertrigo (Skin Fold Dermatitis)

Intertrigo, also known as skin fold dermatitis, is

common in brachycephalic breeds, such as the Shih Tzu, due to their prominent facial folds, vulvar folds, and tail base wrinkles. These warm, moist areas are ideal environments for bacterial and yeast overgrowth.

Clinical Signs

- Redness, swelling, and odour in skin folds
- Brown or yellow discharge
- Constant licking or rubbing
- Pain on touch in severe cases

Diagnosis

- Physical examination: visible irritation in folds
- Cytology: to identify secondary yeast or bacterial infections

Figure 4. *Shih Tzu with severe skin fold dermatitis secondary to excessive skin folds on the face that are a* direct consequence of extreme brachycephalic conformation.

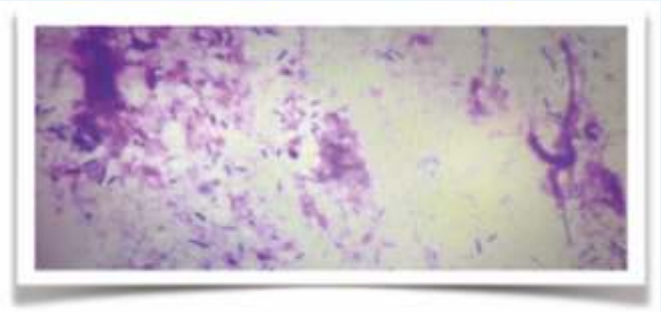


Figure 5. *Rod-shaped bacteria on ear cytology*

Treatment

- Regular cleaning of affected folds (e.g., chlorhexidine wipes)
- Topical antimicrobials or anti-inflammatories
- Weight management: reduces fold depth in obese dogs
- Surgical resection: in severe, chronic cases (e.g., tail fold resection)

Prognosis

With diligent hygiene and infection control measures, the prognosis is generally reasonable. Without regular maintenance, recurrence is a common occurrence.

Otodectes mites in Shih Tzu (ear mites)

Clinical signs :

Intense ear scratching or head shaking

Reddish- brown or black, coffee-ground-like debris in the ear canal

Foul ear odour

Crusts or scabs around the outer ear

Sensitivity when the ears are touched

Secondary ear infections (from scratching)

Diagnosis :

Examine the ear with an otoscope

Perform an ear swab and microscopic exam to identify the mites

Treatment of Otodectes in Shih Tzus

Topical treatments applied to the ear

Systemic treatments:

Revolution (selamectin)

Advocate/advantage multi (moxidectin+ imidacloprid)

Simparica, Bravecto, or nexgard

Ear cleaning: cleaning the ear before treatment

Figure 6. *Examine the ear with a video otoscope Otodectes mites*

Figure 7. *Videootoscope to examine*

Follow up :

Full resolution usually takes 2-4 weeks

A follow-up visit is essential to ensure the infestation is cleared and no infection remains

Traction alopecia in Shih Tzus

Traction alopecia in Shih Tzu is hair loss caused by repeated tension or pulling on the hair, commonly due to tight grooming styles such as topknots, ponytails, or tight collars. This condition typically appears as bald patches, especially on the head, where the hair is tied

Causes :

Tight topknots or hairbands

Repeated use of bows or accessories

Tight collars or harnesses

Harsh brushing or overgrooming

Signs :

Bald spots

Redness or irritation

Broken or thinning hair in specific areas

Treatment

Remove the source of tension

Use soft, loose hair ties

Apply topical soothing agents

In some cases, medication may be needed if there's an infection or inflammation.

Prognosis

Hair regrowth usually occurs within weeks to a few months if treated early

Long-term or repeated tension can cause permanent hair loss

Figure 8. *Traction alopecia in Shih Tzu due to tight grooming styles, such as ponytails*

Case Study: Chronic Skin Disease in a 5-Year-Old Shih Tzu

Patient History

A 5-year-old neutered male Shih Tzu presented with chronic pruritus, recurrent ear infections, malodor, and progressive hair loss over the flanks and tail base. The owner reported multiple previous treatments with antibiotics and steroids, with only partial relief.

Physical Exam

- Greasy coat with scaling and erythema
- Alopecia and lichenification over the flanks
- Interdigital erythema and brown waxy otic discharge
- Foul odour from skin folds

Diagnostics

- Cytology: Malassezia spp. overgrowth in folds and ears
- Skin scraping: negative for mites
- Thyroid panel: within normal limits
- Biopsy: consistent with seborrhea and mild follicular dysplasia

Diagnosis

- Atopic dermatitis with secondary Malassezia dermatitis, seborrhea oleosa, and mild follicular dysplasia
- Chronic intertrigo of facial folds

Treatment Plan

- Weekly antifungal shampoos (miconazole + chlorhexidine)
- Oral oclacitinib (Apoquel) for itch control
- Daily ear cleaner with antifungal properties
- Omega-3 fatty acid supplement
- Regular facial fold cleaning

Outcome

After 6 weeks, the dog's skin showed marked improvement, odour resolved, and pruritus was significantly reduced. Long-term maintenance was recommended to prevent recurrence.

Discussion : Shih Tzus, like many brachycephalic and long-coated breeds, present unique challenges in dermatologic care due to their anatomy, coat type, and genetic predispositions. The most common skin conditions— atopic dermatitis, seborrhea, Malassezia dermatitis, follicular dysplasia, and intertrigo—frequently coexist, making accurate diagnosis and management complex. This overlap can mask or mimic primary conditions, leading to chronic inflammation, recurrent infections, and owner frustration.

Proactive and breed-specific care, including routine grooming, skin fold hygiene, and early intervention for pruritus, is essential. Furthermore, educating owners on the importance of long-term management rather than seeking a "cure" is key to improving

Figure 9. *A Shih Tzu presented with chronic pruritus, recurrent ear infections, malodor, and progressive hair loss and erythema over the flanks and base of the tail.*

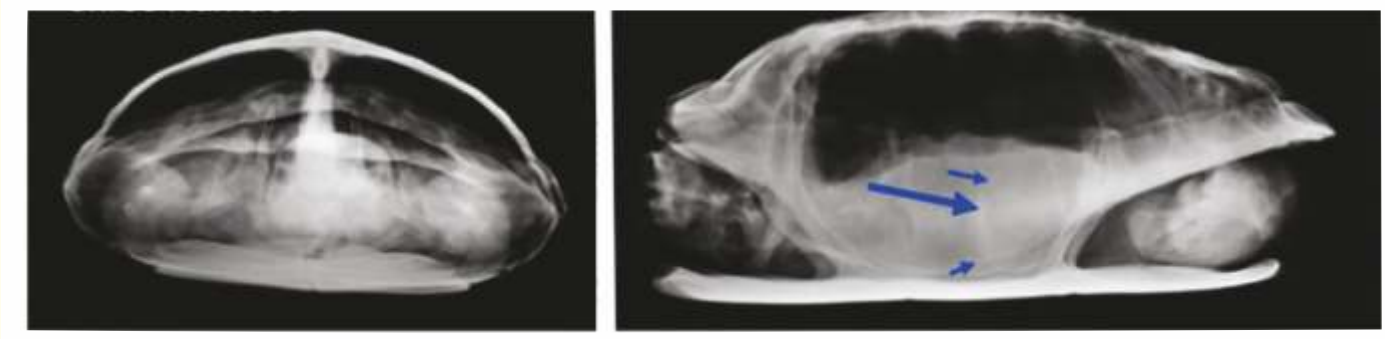
outcomes. Veterinary professionals should consider environmental, dietary, and anatomical factors when forming a treatment plan and be prepared to adjust therapies based on clinical response.

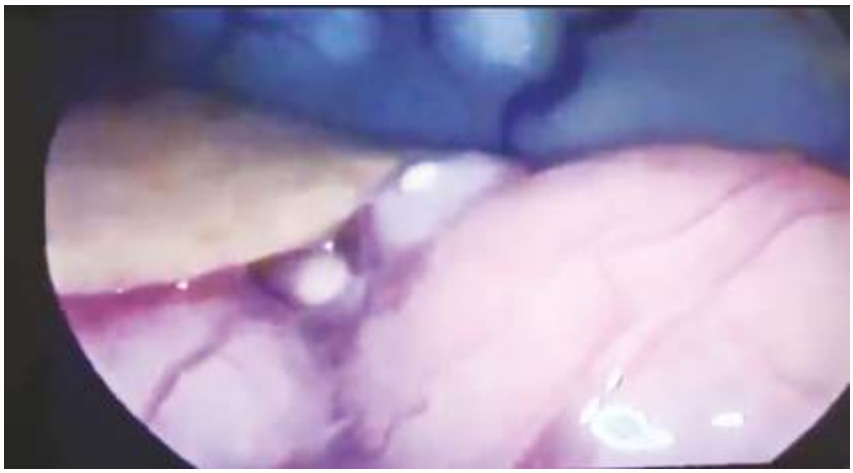
Conclusion : Shih Tzus are prone to a variety of dermatologic disorders that often present concurrently. Early recognition, accurate diagnostics, and personalised management strategies are crucial for controlling these conditions and improving the dog's quality of life. By understanding the breed-specific tendencies and challenges, veterinarians can better serve Shih Tzu patients and reduce the incidence of chronic, relapsing skin disease.

Laparoscopic Surgery in a Turtle for an Egg-bound Condition

Dr. Narendra Pardeshi, Pune

A turtle was presented with an egg-bound condition. After examination. Injection epidocin was given for expulsion of egg. Next day owner informed that turtle started straining and was also active and alert. However until next 24 hours the egg bound condition did not resolve. Blood examination and ultrasound was done and hand feeding was continued. Ultrasound revealed egg in the oviduct and haematological parameters were indicative of anaemia. Since only medical treatment failed to resolve the condition surgical intervention was planned. Surgery was scheduled on 21st July 2025, through laparoscopy. After Intubation, administration of Sevoflurane and Oxygen was carried out. Monitoring was done with BP Doppler which was placed on left side of neck with dynaplast and SPO2 chord at hind leg. Heating pad was kept below turtle to maintain body temperature. Turtle was kept on ventilator with mechanical ventilation 6.9ml per kg tidal volume. With GE 620 anaesthetic workstation, and breathing Inspiration to expiration ratio 2:1.





Laparoscopic assisted oviduct examination was carried out, It was exteriorised from the right side and incision of 2cms was made on right oviduct to expel 4 eggs.

The oviduct was then sutured with 2/0 Vicryl and skin incision was closed in a routine manner. Turtle recovered from anaesthesia in one hour. Injection vitcofol was given post operatively and orally Dexaorange and Liv52 was given, Daily dressing of wound was done with Betadine. The female turtle made an un eventful recovery.

Appeal to Become a Life Member of PPAM

Dear Colleagues,

The Pet Practitioners' Association of Mumbai (PPAM) has always thrived because of the unity, commitment, and active participation of its members. As we continue to grow and serve the veterinary fraternity with academic activities, welfare initiatives, and professional support, we invite all our annual members to take the next step forward–become a Life Member of PPAM.

Why Life Membership.

1. One-time Contribution – No yearly renewal hassles.
2. Permanent Association – Stay connected for life with your fraternity.
3. Priority Benefits – Access to academic programs, CMEs, workshops, and welfare initiatives.
4. Greater Voice – Life members play a decisive role in shaping the future of the Association.
5. Sense of Belonging – Strengthen professional bonds and be a permanent part of PPAM's legacy.

By becoming a Life Member, you not only secure your place in the Association but also contribute to building a stronger, more resourceful, and united body of practitioners.

Our Appeal. Sincerely urge all annual members to convert their annual membership to Life Membership at the earliest and enjoy the lifelong benefits of being part of PPAM's journey.

Together, let us continue to make PPAM a symbol of knowledge, unity, and progress in small animal practice.

Warm regards,
Dr. Anil Vade, President, PPAM

Appeal to PPAM Members to Renew Membership

1. **Renewal of Annual Membership** — **Rs. 1500.00 + GST (Rs. 270.00) = Total Rs. 1770.00**
2. **New Membership** — **Rs. 1750.00 + GST (Rs. 315.00) = Rs. 2065.00**
3. **Life Membership** — **Rs. 17500.00 (No GST)**

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A/c name : Pet practioners association
Branch : Santacruz (W)
A/c no : 744946564
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Hon. Treasurer Dr. Hitesh Swali on 98211 20058 &
Hon. Joint Treasurer Dr. Ukale Prabhakar 90299 38325.
Please also mention your complete name,
date of payment and transaction id.)

Scan For Payment

Bombay Veterinary College 140th Foundation Day Celebration

MUMBAI VETERINARY COLLEGE
Maharashtra Animal & Fishery Sciences University

Greetings from the Associate Dean

Mumbai Veterinary College, Asia's oldest and premier veterinary institution, celebrates 140 glorious years on **2nd August 2025**.

Since its founding in **1886**, the college has been a pioneer in veterinary education, research, and service. This milestone reflects the dedication of our faculty, students, alumni, and staff who have carried forward its rich legacy with passion and purpose.

As we mark this historic milestone and celebrate this momentous occasion, I extend my heartfelt gratitude to all who have been part of this remarkable journey.

Let us come together to commemorate the past, celebrate the present, and envision a future of continued excellence.

Celebrating 140 Glorious Years (1886 – 2025)

With warm regards and best wishes,
Dr. Shailesh D. Ingole
Associate Dean
Mumbai Veterinary College, MAFSU, Mumbai

Bombay Veterinary College (BVC), also known as Mumbai Veterinary College, is a government-run institution established in 1886. It is one of India's oldest and most prestigious veterinary colleges, offering a range of undergraduate, postgraduate, and doctoral programs. The college is affiliated with the Maharashtra Animal and Fishery Sciences University (MAFSU), Nagpur. BVC operates on two campuses in Mumbai: Parel Campus: Located behind KEM Hospital, this heritage site is where postgraduate programs are conducted. Goregaon Campus: The undergraduate campus is situated opposite Hub Mall.

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Green Lipped Mussel	200 mg
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Yucca Schidigera	90 mg
Calcium Ascorbate (Vit-C)	60 mg
Zinc Sulphate	7 mg
Hyaluronic Acid	50 mg
Vitamin E	60 IU
Collagen Peptide (Type II)	60 mg

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DOG SIZE	DOSAGE
Small	½ Tablet
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45+ kg	2 tablets

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*Veterinary Use Only. Not For Human Use

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Article

The Silent Struggle: Recognizing Osteoarthritis in Dogs and the Role of Supplements in Early Intervention

Dr. Ivanka Marie Fernandes
B.V.Sc & A.H (Mumbai)
Product Manager, Drools Pet Food Pvt. Ltd.

Osteoarthritis (OA) is one of the most common chronic orthopedic conditions in dogs, affecting an estimated **20% of dogs over one year of age** and up to **80% of senior dogs**. Despite its prevalence, OA often remains underdiagnosed in its early stages, largely because clinical signs can be subtle and easily attributed to "normal aging." This silent progression underscores the importance of **early recognition** and the timely introduction of **multimodal management** strategies, including nutritional supplements, to slow disease progression and maintain quality of life.

Early Recognition: Identifying the Subtle Signs

Osteoarthritis develops gradually as a result of joint cartilage degeneration, subchondral bone remodeling, and chronic low-grade inflammation. While advanced OA presents with overt lameness, stiffness, or reluctance to move, the early signs are more nuanced:

- **Reduced activity levels** – dogs may tire more easily during play or exercise.
- **Behavioral changes** – irritability, decreased interest in interaction, or reluctance to jump onto furniture or into cars.
- **Altered gait or posture** – stiffness after rest, shortened stride, or favoring one limb.
- **Subtle performance decline** – working or athletic dogs may show reduced enthusiasm or endurance.

Veterinarians must educate pet owners to distinguish between "slowing down with age" and the early signs of OA. Tools such as the **Canine Brief Pain Inventory (CBPI)** and **Liverpool Osteoarthritis in Dogs (LOAD)** questionnaire can support structured assessment.

Why Early Intervention Matters

Osteoarthritis is **progressive and irreversible**, but early intervention can **delay cartilage degradation, reduce inflammation, and preserve joint function**. If left untreated, chronic pain cycles become established, leading to muscle atrophy, compensatory injuries, and diminished quality of life.

Timely use of **joint supplements**—in combination with weight management, physiotherapy, and appropriate exercise—can offer disease-modifying support before irreversible damage occurs.

The Role of Supplements in OA Management

1. Glucosamine and Chondroitin Sulfate

- Structural components of cartilage and synovial fluid.
- Evidence suggests they support cartilage metabolism and may reduce inflammatory mediators in the joint.
- Clinical trials in dogs show variable results, but long-term use is associated with improved mobility and reduced NSAID reliance.

2. Omega-3 Fatty Acids (EPA & DHA)

- Potent anti-inflammatory properties via modulation of eicosanoid pathways.
- Randomized controlled studies demonstrate improved weight-bearing and reduced pain scores in arthritic dogs supplemented with marine-derived omega-3s.

3. Green-Lipped Mussel Extract (Perna canaliculus)

- Rich in omega-3s, glycosaminoglycans, and antioxidants.
- Shown to improve joint function and reduce clinical signs of OA in several canine studies.

4. Avocado–Soybean Unsaponifiables (ASU)

- Reduce pro-inflammatory cytokines and stimulate cartilage repair.
- Often combined with glucosamine and chondroitin for synergistic effect.

5. Collagen and Hyaluronic Acid

- Hydrolyzed collagen peptides support cartilage matrix integrity.

- Hyaluronic acid supplementation contributes to synovial fluid viscosity and lubrication.

6. Curcumin and Other Botanical Extracts

- Provide antioxidant and anti-inflammatory effects.
- Veterinary evidence is emerging, with promising data extrapolated from human and experimental models.

Integrating Supplements into a Multimodal Strategy

Supplements should not be seen as a standalone therapy but as part of a **multimodal management plan** that may include:

- **Weight control** – the single most important factor in reducing OA progression.
- **Exercise modification** – controlled, low-impact activity to maintain muscle mass and joint mobility.
- **Physiotherapy and rehabilitation** – hydrotherapy, massage, and targeted strengthening.
- **Pharmacological support** – NSAIDs for pain control, used judiciously alongside nutraceuticals.

Early initiation of supplements may reduce reliance on long-term pharmacological intervention, potentially lowering risks of adverse drug reactions.

Conclusion

Osteoarthritis in dogs is a silent yet progressive condition that often goes unnoticed until advanced stages. Recognizing the **subtle early signs** is critical for timely intervention. Supplements such as glucosamine, omega-3 fatty acids, green-lipped mussel, and ASU offer promising support in managing the disease process, especially when integrated into a comprehensive care plan.

By shifting the focus to early detection and proactive supplementation, veterinarians can help ensure that dogs with OA maintain mobility, comfort, and quality of life well into their senior years.

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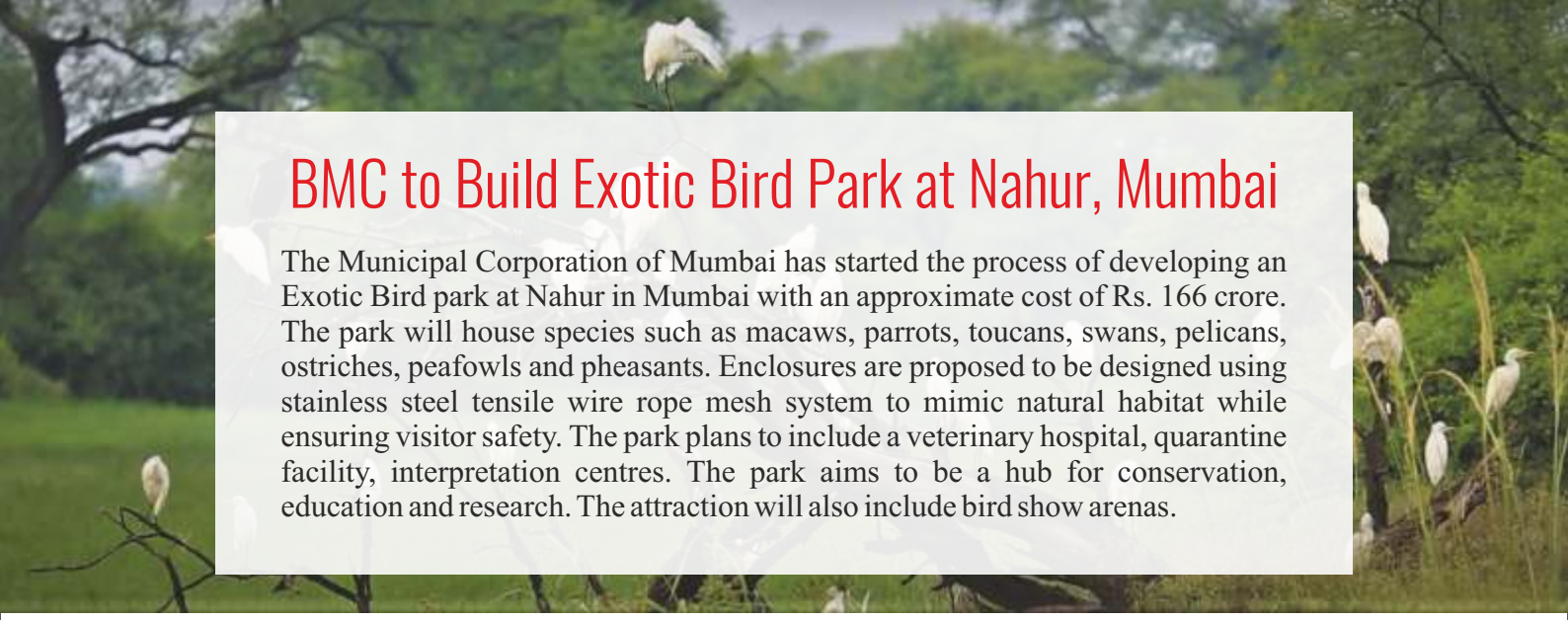
8. Pollard, B., Guilford, W. G., & Ankenbauer-Perkins, K. L. (2006). Clinical efficacy and tolerance of an extract of green-lipped mussel in dogs presumptively diagnosed with degenerative joint disease. *New Zealand Veterinary Journal*, 54(3), 114–118.

FSAPAI representation at WSAVA 2025 Congress Assembly meeting on 24th September 2025

PPAM participation at WSAVA Congress 2025 at Rio de Janeiro, Brazil, September 25-27, 2025.



BMC to Build Exotic Bird Park at Nahur, Mumbai

The Municipal Corporation of Mumbai has started the process of developing an Exotic Bird park at Nahur in Mumbai with an approximate cost of Rs. 166 crore. The park will house species such as macaws, parrots, toucans, swans, pelicans, ostriches, peafowls and pheasants. Enclosures are proposed to be designed using stainless steel tensile wire rope mesh system to mimic natural habitat while ensuring visitor safety. The park plans to include a veterinary hospital, quarantine facility, interpretation centres. The park aims to be a hub for conservation, education and research. The attraction will also include bird show arenas.

Let us as Veterinarians Understand

MAHARASHTRA MEDICARE SERVICE PERSONS AND MEDICARE SERVICE INSTITUTIONS (PREVENTION OF VIOLENCE AND DAMAGE OR LOSS TO PROPERTY) ACT, 2010.

Dr. S. V. Vishwasrao

An Act to provide for the prevention of violence against Medicare Service Persons and prevention of damage or loss of property of Medicare Service Institutions in the State of Maharashtra and for matters connected therewith or incidental thereto.

Definitions : In this Act, unless the context otherwise requires, —

(a) **"Medicare Service Institution"** means an institution, providing medicare service to people either in Medicare Service Institution or through Mobile Medicare Unit or by arranging medical check up camps, under the control of the State Government or the Central Government, or a local body including any private hospital having facilities for treatment of the sick and used for their reception or stay in any private maternity home, where women are usually received and accommodated for the purpose of confinement and ante-natal and post-natal care in connection with the child birth or anything connected therewith and any private nursing home used or intended to be used for the reception and accommodation of person suffering from any sickness, injury or infirmity, whether of body or mind, and providing of treatment or nursing or both of them and includes convalescent home.

(b) "Medicare Service Person", in relation to Medicare Service Institution, shall include, —

(i) **Registered Medical Practitioner,** Practitioner or Registered Practitioner (including a person having provisional registration) working in a Medicare Service Institution other than the public servant within the meaning of section 21 of the Indian Penal Code (45 of 1860);

(ii) **Registered Nurse,** registered under the Maharashtra Nurses Act, 1966 (Mah. XL of 1966), other than the public servant within the meaning of section 21 of the Indian Penal Code (45 of 1860);

(iii) **Medical Student;**

(iv) **Nursing Student;** and

(v) **Para-Medical Worker** and other member staff or worker directly or indirectly employed by a Medicare Service Institution for providing required services other than the public servant, within the meaning of section 21 of the Indian Penal Code (45 of 1860).

Please note PPAM members:

(So, at present the Act does not explicitly mention veterinarians, but similar provisions may apply under General law in case of threats and violence).

Please note the above law was discussed in our PPAM AGM on 22.06.2025 and a representation to the Maharashtra state Government is under process to include veterinarians under this law.

Important Circular from FDA Mumbai

FDA Maharashtra

Government of Maharashtra
Commissioner
Food and Drug Administration, Maharashtra State,
S.No.341, Bandra-Kurla Complex, Opp. RBI, Bandra East
Mumbai-400 051

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परिपत्रक / ईमेलद्वारे

जा.क्र. औवि/ Prescription /१११ -२५/१५

दिनांक : ०६.०८.२०२५

विषय:- औषधे व सौंदर्य प्रसाधने कायदा १९४० व त्याअंतर्गत नियम
नोंदणीकृत पशुवैदयकीयांच्या चिठठी (Prescription) शिवाय औषधी विक्री न करणेबाबत.

संदर्भ :- अध्यक्ष, महाराष्ट्र राज्य् पशुवैदयक परिषद, नागपूर यांचे पत्र क्र.मरापप/प्रशासन/२२८/२५, दि. ०१.०८.२०२५

सर्व विभागीय सह आयुक्त, सहायक आयुक्त व औषध निरीक्षक (औषधे) यांना कळविण्यात येते की, महाराष्ट्र राज्य पशुवैद्यकीय परिषद, नागपूर यांनी असे निर्देशनास आणले आहे की, "महाराष्ट्र राज्यात नोंदणीकृत पशुवैद्यकीय यांच्या चिट्ठी (Prescription) शिवाय औषधी विक्रेता यांचे मार्फत सर्रास औषधी विक्री होत आहे व अश्या प्रकारच्या अनेक तक्रारी महाराष्ट्र राज्य पशुवैदयक परिषद, नागपूर कार्यालयास प्राप्त झाल्या आहेत. त्यामुळे औषधे व सौंदर्य प्रसाधने अधिनियम १९४० चे उल्लंघन होत आहे. AMR (Anti-Microbial Resistance) उग्ररुप धारण करीत आहे. परिणामी शेतक-यांच्या जनावरांवरील औषधोपचाराचा खर्च वाढत आहे. AMR (Anti-Microbial Resistance) समस्या वाढण्यामागे Antibiotics चा जनावरांमध्ये अनियंत्रित वापर व दुध व पशुजन्य पदार्थामार्फत जनमानसावर होणारा परिणाम लक्षात घेता वेळीच नियंत्रण करण्यासाठी कळविले आहे. "

तरी आपल्या कार्यक्षेत्रातील जनावरांची औषध विक्री करणाऱ्या औषध विक्रेत्यांद्वारा अनुसूची - H, H1 व अनुसूची - X वर्गीकृत औषधांची विक्री ही नोंदणीकृत पशुवैदयकीय यांच्या चिट्ठी (Prescription) शिवाय विक्री केली जात नाही यांची खात्री करावी, आणि ज्या औषध विक्रेत्यांद्वारा या वर्गीकृत औषधांची विक्री ही विना चिट्ठी (Prescription) शिवाय केली जाते. त्यांच्यावर सक्त कारवाई करावी.

(दा. रा. गहाणे)
सह आयुक्त(औषधे),मुख्यालय तथा
नियंत्रण प्राधिकारी
अन्न व औषध प्रशासन,म.राज्य.

प्रति,
सर्व विभागीय सह आयुक्त (औषधे)/सहायक आयुक्त (औषधे)/औषध निरीक्षक,
अन्न व औषध प्रशासन, म. राज्य.

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BRIHANMUMBAI MUNICIPAL CORPORATION
VETERINARY HEALTH DEPARTMENT

BMC's Mass Stray Dog Anti-Rabies Vaccination Campaign

As a collaborative effort, Brihanmumbai Municipal Corporation and Animal Welfare Organizations have started a mass anti-rabies vaccination drive for stray dogs across Mumbai city and suburbs from 1st September 2025 which will continue upto 15th March 2026. This initiative seeks to protect both humans and animals from the threat of rabies, promoting a healthier and safer community.

Key Highlights:

Comprehensive Coverage: The campaign will cover all areas of Mumbai, in a systematic manner, including the city and suburbs, ensuring no stray dog is left unvaccinated.

Collaborative Effort: Three organizations will work together, pooling their resources and expertise to make this initiative a success.

a) Youth Organization in Defence of Animals

b) Utkarsh Global Foundation

c) Universal Animal Welfare Society

Free Vaccination: The anti-rabies vaccination will be provided free of cost to all stray dogs. These vaccinated dogs will be marked with coloured animal markers on their forehead / body.

Technological Assistance: BMC associated organization Worldwide Veterinary Services – Mission Rabies have made available their mobile application to record the vaccination data of every dog vaccinated with GPS location and photograph of each dog. So also, the dog's sterilization status will be recorded and intact dogs will be reported to Animal Birth Control Centres.

Community Engagement: Residents' Welfare Associations / Apartment Owners' Associations / Animal Feeders / Animal Care-givers are encouraged to participate and support the campaign by allowing access to their areas and helping to identify stray dogs.

Objective:

The primary objective of this campaign is to achieve widespread immunization of stray dogs against rabies, thereby reducing the risk of rabies transmission to humans and other animals. This initiative underscores the importance of community-driven solutions in addressing public health concerns by:

1. **Preventing human rabies deaths:** Vaccinating stray dogs helps break the transmission cycle of rabies, reducing the risk of rabies transmission to humans through dog bites.
2. **Protecting animal welfare:** Vaccinating stray dogs not only prevents the suffering caused by rabies but also promotes the overall well-being of these animals by providing them with essential healthcare.
3. **Enhancing community safety:** By reducing the prevalence of rabies among stray dog populations, we are creating safer environments for residents, particularly children who are more susceptible to dog bites.

We urge all Mumbai residents to support this noble cause by cooperating with the vaccination teams and spreading awareness about the importance of rabies prevention. Together, we can make Mumbai a safer and healthier place for both humans and animals.

Let's work together to create a rabies-free Mumbai!

(Dr. K. A. Pathan)

General Manager

Veterinary Health Dept & Deonar Abattoir

228 PARTICIPANTS ATTENDED THE CPD FASAVA

Highlights of FASAVA CPD hosted by PPAM

The Event was held on Sunday, 21 September 2025 at Hotel Peninsula Grand, Andheri, Mumbai, India.

Speaker - Dr. TERRY KING, BVSc MANZCVS (Australia)
Emergency & Critical Care Internal Medicine (Specialist)

Sponsors were - Freossi & Fredna Vet Diagnostics (Fredun Pharmaceuticals)

Lectures on Small Animal Emergency and Critical Care

1) Essentials of Emergency and Critical Care Management and Monitoring of the Critical Patient.
2) Tubes and Holes: Placing needles, catheters and tubes for diagnosis and management of the critically ill patients.
3) Pleural Effusions: Case based approach to management.
4) Urinary Tract Emergencies.
5) The Gastrointestinal Tract in crisis - case based selection
6) Acute Systemic Anaphylaxis
7) Pancreatits - Canine and Feline

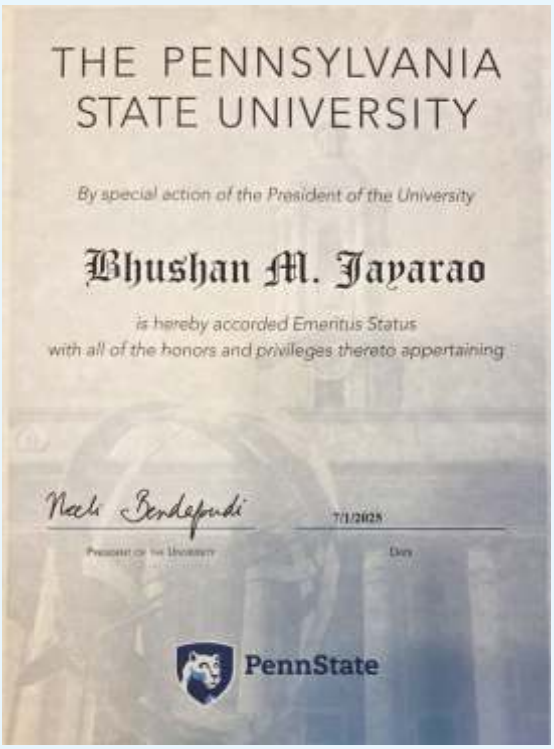
Final session: Q & A / Feedback Session.

Dr. Terry King

“PPAM proud moments

Dr. Bhushan Jayarao

It is a matter of immense pride to all Bovets as our revered Guru, friend and philosopher, Dr. Bhushan Jayarao, has been coveted with the prestigious Emeritus status at the Pennsylvania State University, USA. Since joining Penn State, Bhushan sir has given opportunity to many vet students from India and other countries for working in his laboratory, and he is instrumental in shaping the careers of many of them. He is an excellent host as witnessed by many of my senior colleagues. We, extend all our warmth and best wishes to Dr. Bhushan Jayarao for this recognition. Hearty congratulations, sir and wish you be bestowed with many more laurels in future, too.



Emeritus Status at Penn State!

Emeritus Status is a privilege granted by the President of the University. It is not a right, and is given only in recognition of sustained meritorious academic service to The Pennsylvania State University.

Proud Moment for PPAM Members and Private Small Animal Practitioners

Dr. Vishal Salunkhe

Dr. Vishal Salunkhe, Private Practitioner, Aruna Anand Pet Clinic, Pune.

PPAM appreciates the much-needed Guidelines/SOP for Blood Transfusion and Blood Bank for Animals in India.

PPAM appreciates Government of India for publishing the Guidelines/SOP for Blood Transfusion and Blood Bank for Animals in India published in August 2025 by the Department of Animal Husbandry & Dairying Ministry of Fisheries Animal Husbandry & Dairying Government of India.

This document outlines the Standard Operating Procedure (SOP) for blood transfusion and blood banking services for companion animals and livestock in India. It establishes national guidelines for donor selection, blood collection, processing, storage, transfusion protocols, donor welfare, and legal and ethical standards. The SOP aims to standardize transfusion practices, ensure donor animal welfare, and integrate One Health principles to minimize zoonotic risks. Key highlights include recommendations for the establishment of state-regulated blood banks, mandatory donor health screenings, standard storage conditions for blood components, clear transfusion monitoring protocols, and a robust legal framework to support nationwide implementation. Emphasizing ethical considerations, voluntary non-remunerated donations, and public awareness initiatives, this document also advocates for capacity building through veterinary training programs and future research in advanced transfusion technologies. This SOP provides a policy and procedural foundation to establish a structured and ethical animal blood banking network across India, contributing significantly to veterinary healthcare and animal welfare.

It's indeed a proud moment for Privately practicing Veterinarians that Dr. Vishal Salunkhe, Private Practitioner, Aruna Anand Pet Clinic, Pune has been a Contributor to this important document.

Dr. Vishal began his veterinary career with a BVSc & AH from Bombay Veterinary College, Mumbai, followed by a Master's in Veterinary Science (Broiler Nutrition) from Jabalpur. His passion for research then took him overseas, where he earned an MS in Molecular Biology (Sweden/Imperial College London, UK) with a focus on prostate cancer in humans. He went on to pursue a PhD at University College Dublin, Ireland, as a Marie-Curie Fellow of the European Union, studying megakaryocytes and platelets in humans. Furthering this line of work, he completed his post-doctoral fellowship at Sanquin Blood Research Institute, Amsterdam, continuing his focus on blood cell biology.

Current Roles (2025):

- Veterinary Practitioner at Aruna Anand Pet Clinic, Pune
- CEO & Co-founder of Ominar Innovations Pvt. Ltd. (https://ominar.ai/)
- Passion project: VETBLOOD Collection bags for transfusion in Small and Large animals, Blood banks etc.

Dr. Jairam Ramani, Dr. Sarojinee Kamble, Dr. Makarand Chousalkar, Dr. Rina Dev, Dr. Omkar Pawaskar, Dr. Hitesh Swali & Dr. R. T. Sharma

PPAM members received the prestigious Indian Pet Industry award at the hands of Hon Minister Shri Satya Pal Singh Baghel Minister of State for Animal Husbandry and Dairying Government of India at ITC Maurya New Delhi on 23.08.2025 in New Delhi.

Dr. Jairam Ramani

Dr. Sarojinee Kamble

Dr. Makarand Chousalkar

Dr. Rina Dev

Dr. Omkar Pawaskar

Dr. Hitesh Swali

Dr. R. T. Sharma

Dr. Vikram Niratle

Excellent work done by Dr. Vikram Niratle. Proactive Official in MBMC. Congratulations Dr. Niratle.

Swacha sarvekshan award for being 1st in Maharashtra. Felicitation at the hands of Commissioner Radhabinod Sharma (IAS). Team of Animal Husbandry department.

Dt. comm. Dr. Sachin Banger and Add. comm. Dr. Sambhaji Panpatte. All veterinarian.

Dr. Pradip Chaudhari

Dr. Pradip Chaudhari presentation at International Asia Veterinary Conference IAVC 2025 held in Hong Kong during 12-14th August 2025.

Dr. Pradip Chaudhari M.V.Sc., D.M.R.I.T., Ph.D. Scientific Officer 'H', Professor and Head, Comparative Oncology Program & Translational Preclinical Imaging and Radiotherapy Facility, Animal Oncology Group, Advanced Centre for Treatment, Research & Education in Cancer (ACTREC), Tata Memorial Centre, Navi Mumbai presented a paper titled "Cancer Care in Companion Animals in India: Emerging Trends, Challenges, and Opportunities"

VPWA Monsoon Clinical Meet on 20.07.2025, Navi Mumbai

Dr. Shriniwas Vishwasrao
Dr. Shvesh Bandiwadekar
Dr. Umesh Kumbhar

VPWA Winter clinical Meet Was held on 20.07.2025.
The speakers and topic were.

1. **Dr. Shriniwas Vishwasrao**
   A) Veterinary Radiology. The Art of being a doctor first and an Image Reader later.
   B) Radiology in Diagnosis of Soft Tissue lesions-the strengths and limitations for the Practicing Veterinarians.
2. **Dr. Shvesh Bandiwadekar**
   The Blood Gossip. What the blood report whispers to you ?
3. **Dr. Umesh Kumbhar**
   Infertility in Large Ruminants.

Dr. Umesh Kumbhar **Dr. Shvesh Bandiwadekar**

VPWA MONSOON CLINICAL MEET ON 20.07.2025 AT NAVI MUMBAI

Dr. Adarsh Kumar

Dr. Adarsh Kumar, Head Department of Surgery and Radiology College of Veterinary and Animal Sciences, Himachal Pradesh Agricultural University Palampur has been nominated by the President of India to the court of central University of Punjab. Proud moment for Veterinary Profession.

Prez nominates HPKV prof to Central varsity court panel

OUR CORRESPONDENT

PALAMPUR, AUGUST 16

Dr Adarsh Kumar

Dr Adarsh Kumar, Senior Professor and Head of the Department of Surgery and Radiology at the College of Veterinary and Animal Sciences, HP Agriculture University, Palampur, has been nominated by the President of India as one of her three nominees to the Court of the Central University of Punjab.

The nomination, made under the provision empowering the Visitor (the President of India) to appoint "three persons who are well-known academicians or who have special knowledge or practical experience in higher education," places Dr Adarsh among an elite group of academicians.

Dr Adarsh Kumar is renowned for his academic service, research portfolio and mentorship, significantly advancing veterinary sciences in India.

Vice-Chancellor Prof Naveen Kumar said, "This nomination is a matter of great pride for the entire university fraternity. Dr Adarsh's dedication to academic excellence, innovative research and commitment to service have brought laurels to the university. His role in the Court of the Central University of Punjab will further enhance academic collaborations and promote quality higher education."

Dr Adarsh will serve alongside Prof Sonia Chawla and Prof Sanjay Kaushik, distinguished academicians from NIT Jalandhar and Punjab University, Chandigarh, respectively.

Dr. Shriniwas Vishwasrao

Dr. Shriniwas Vishwasrao delivered a talk on "Radiology Integration in Small Animal Clinics.Focus on Osteoarthritic care" at Hisar Haryana on 23.08.2025. Veterinarians from government organizations, private clinics and veterinary colleges including post graduate students attended the lecture in large numbers.

HISAR HARYANA 23.08.2025

Essentials of Emergency and Critical Care

Management & Monitoring of the Critical Patient

Dr. Terry King
(terenceking70@gmail.com)

Overview of Emergency & Critical Care.

This involves the basics of emergency & critical care medicine as well as the essentials of management and monitoring of the critically ill patient **The "Golden Rule of Emergency Medicine" is: Treat the most life-threatening problem first!** Dr Michael Garvey in 1990 defined the ten rules of Emergency Medicine:

1. **Attend to the most life-threatening problems first -** the respiratory system comes first, then the cardiovascular problems (including shock and haemorrhage) closely following, then central nervous system problems, then abdominal problems. The rest of the body can usually wait until the first four are treated and stabilised.

2. **Minimise Patient stress at all times -** cage rest is sometimes the best medicine. Make sure the patient is as stable as possible before undertaking stressful procedures, as there is a limit to what the critical patient can tolerate in the realm of physical restraint and manipulation.

3. **Expect the unexpected -** the emergency patient is rapidly changing (and can develop a series of life-threatening complications without warning) and frequently requires intensive monitoring and re-evaluation. **The question "What is likely to go wrong next?" should be asked regularly.**

4. **Nature sides with the hidden flaw -** what you don't know will hurt you. It is important to anticipate complications and initiate monitoring procedures for early detection. Simple diagnostic tests (PCV/TP, USG, urine dipsticks, BUN sticks, glucose sticks, ECG's, etc) help gather information quickly and safely and more informed decisions can be made.

5. **Do not place the Patient at risk to achieve a diagnosis -** it is better to go without a diagnosis than to worsen the situation by attempting to find one.

6. **When in doubt, look at the Patient -** there is no better substitute for careful patient monitoring and frequent patient observation. Merril C. Sosman said "you see only what you look for; you recognise only what you know".

7. **Left to themselves, things usually go from bad to worse -** there is some discomfort in proceeding without knowing everything, but we often must as minimal treatment followed by waiting to see what happens does not usually achieve a positive result in the emergent patient. Benjamin Franklin said, "the little neglect may breed mischief ... for want of a nail the shoe was lost; for want of a shoe the horse was lost; and for want of a horse the rider was lost".

8. **When you can't make a diagnosis, treat for the treatable -** many post-trauma complications don't become evident for 24-72 hours. Due to the risk of certain procedures or because data may not be available or because the technology may not be an option, it is not always possible to narrow down the diagnosis. In these cases, it is appropriate to treat for the best possible disease.

9. **When everything seems to be going well you have obviously overlooked something -** do not take a patient's stable condition for granted. Monitoring and observation must continue.

10. **Don't panic! The patient is the one with the disease -** panic leads to poor decision making, a flurry of useless activity and a tendency towards overtreatment. There is less tolerance for error in the critical patient.

Systemic Inflammatory Response Syndrome (SIRS) & Multiple Organ Dysfunction Syndrome (MODS)

are among a group of diseases that share a common pathophysiology, an inciting stimulus initiates the Production and release of circulating mediators which cause systemic inflammatory changes. Once the mediators have entered the circulation, the progression and complications are similar for each disease - peripheral vascular dilatation, increased capillary permeability and depressed cardiac function: shock ensues. Sepsis. SIRS (Systemic Inflammatory Response Syndrome) and MODS (Multiple Organ Dysfunction Syndrome) hinder the successful treatment of critically ill dogs and cats; morbidity is one hundred percent and mortality rates are high.

(a) Systemic Inflammatory Response Syndrome (SIRS) is the systemic inflammatory response to a variety of severe clinical insults; it is a massive inflammatory reaction resulting from the systemic release of inflammatory mediators (largely cytokines). Systemic stressors capable of inducing SIRS include: -

sepsis, septicaemia (bacterial, viral, fungal, etc.)

- endotoxaemia
- heat stroke
- burns
- uraemia
- trauma
- shock (haemorrhagic, hypovolaemic)
- ischaemia
- disseminated cancer
- gastrointestinal ischaemic or inflammatory disease
- pancreatitis
- infections of any variety

- snake bite
- autoimmune diseases (SLE, AIHA, ITP)

In veterinary medicine, criteria for the presence of SIRS include any initiating cause/disease plus two or more of the following: -

- Temperature > 39.5°C or < 37.8°C (D&C)
- Heart Rate 160 BPM (D) ≥ 250 (C)
- Respiratory Rate >20 breaths per minute or PaCO2< 32 mmHg (D&C)
- White Cell Count > 12 x 10^9L or < 4 x 10^9/L or > 10% bands

Clinical manifestations of SIRS include:

1. mild to moderate depression;
2. poor appetite;
3. fever;
4. hyperglycaemia;
5. leucocytosis, possibly following transient leukopenia, with a left shift and mild toxicity;
6. vasodilation (red mucous membranes; accelerated capillary refill time);
7. "bounding" pulse quality;
8. normal to high cardiac output
9. tachycardia:
10. tachypnoea: hyperventilation
11. non-haemorrhagic diarrhoea:
12. heart murmur
13. Normal to hyperactive coagulation:
14. normal to mildly impaired organ function.
15. nonspecific increase of liver enzymes (Particularly alkaline phosphatase
16. hypoalbuminaemia

b) SEPSIS is the systemic response to infection it is manifested by the same 2 of 4 criteria as in SIRS tachypnoea, tachycardia, hyperthermia or hypothermia, leucocytosis or leucopaenia.

SEPSIS SYNDROME is Sepsis (same criteria) with hypoxaemia, lactic acidaemia, oliguria and altered mentation.

SEPTIC SHOCK is sepsis syndrome with hypotension (systolic blood pressure < 90 mmHg or a reduction of more than 40 mmHg from the baseline).

REFRACTORY SEPTIC SHOCK persists post 1-2 hours despite adequate fluid resuscitation and instropic and vasopressor support.

c) Multiple Organ Disfunction Syndrome (MODS) is the presence of altered organ function in the acutely ill patient such that heamostasis cannot be maintained without intervention. It is a common pathway of organ failure resulting from SIRS and this common pathway tends to be followed sequentially regardless of the inciting case of SIRS.

Clinical manifestation of MODS include:

- moderate to severe depression:
- no appetite:
- subnormal core temperature
- hypoglycaemia
- leucopaenia or a large. rapid decrease in leucocytes with marked left shift and toxic neutrophils:
- vasoconstriction
- low cardiac output.
- low arterial and central venous blood pressure
- tachycardia
- high venous oxygen:
- tachypnoea
- hyperventilation
- haemorrhagic diarrhoea:
- heart murmur:
- hypoactive coagulation with clinical petechiae or bleeding.
- lactic/metabolic acidosis.
- moderate to severe impairment of organ function (heart, kidney, gut, lungs)

Moderate increase in liver enzymes

Hypoalbuminaemia.

The progression of MODS in dogs classically follows the pattern below.

Malnutrition

DIC

Cardiac arrhythmias

Pulmonary disfunction (1-3 days)

Acute respiratory distress syndrome (3-4 days)

Gastro intestinal failure (3-4 days)

Hepatic failure (3-4 days)

Renal failure (5-6 days after onset)

Cardiac failure (5-6 days after onset)

Stupor/coma (5-6 days after onset)

Clinically the above progression isn't always apparent and some patients don't live long enough to see this progression with them dying of DIC or cardiac arrhythmias for example. Also, renal dysfunction is seen earlier then the above table would suggest further we often see renal and cardiac signs in the absence of pulmonary signs. Species difference may also cause variations between the presentations we see and the literature description of MODS. Dogs tend to clear endotoxins and circulating bacteria in the spleen and liver while cats (similar to humans) use the lung to clear bacteria and toxins.

(d) SIRS Checklist (Kirby's Rule of 20)

Sick animals in SIRS and animals presenting in MODS. are genuine medical emergencies. The key to successful outcome in these patients is early aggressive intervention and the anticipation and pre-emptive treatment of potential complications. These animals are in three types of shock simultaneously (hypovolaemic, distributive. cardiogenic): they are experiencing massive third

space fluid losses and dehydration. Oxygen delivery to the tissues is compromised and oxygen demand is increasing. They are difficult cases to treat. requiring a massive input of resources, nursing time and monitoring. The major goals of treatment in the SIRS/MODS patient are to deliver oxygen to the tissues, control or eliminate the inflammatory focus, maintain organ function and provide nutritional support. Certain drugs are also employed in an effort to modulate the body's inflammatory response. Intensive monitoring is essential and Rebecca Kirby has defined 20 parameters that should be monitored regularly (q 12-24 hours) in critically ill SIRS patients.

SIRS CHECKLIST		
FUNCTIONS TO ASSESS	GOAL	MONITOR
Cardiovascular		
1. Heart Rate Rhythm Contractility 2. Blood pressure	within normal limits No arrhythmias FS > 35% MAP > 60 Systolic > 90	HR ECG FP strong MAP
Respiratory		
3. Oxygenation 4. Aspiration pneumonia	RR<30 PaO2 >100 PaCO2 < 35 Clear on auscultation and XRay	RR PaO2 PaCO2 XRay chest
Gastrointestinal		
5. GI motility Mucosal integrity	Borborygmus heard Emesis controlled pH < 6?	Auscult abdomen Record emesis Do pH and blood on gastric aspirates
Urogenital		
6. Renal function	Urea < 7 mmol/L Urine output > 1ml/kg/hr	Urea, creatinine Urine volume
Neuro		
7. Mentation	LOC = Alert Glucose 4 - 8 mmol/L Serum Osm = 300 mOsm/L	LOC Glucose Serum Osm
Haemo – Lymphatic		
8. Immune status, WCC antibiotic dosage 9. Coagulation status 10. PCV	T < 39'C ACT < 2.25 min Platelets > 100 FDP's negative PCV 35 +/- 5	Temperature aPTT, PT, ACT Platelets FDP's PCV
Fluids, Acid-Base, Metabolism		
11. Fluid Balance 12. Oncotic pull 13. Albumin 14. Electrolytes & acid-base 15. Drug dosage and excretion	CVP 8-12 cm H2O Positive fluid balance TP > 40 g/L Alb > 20 g/L pH @ 7.35, K>4.5, Na 140-145 Cl 110-120, HCO3- 20-24	CVP Ins – Outs TP Alb Measure all List all drugs ALT, AST, Creatinine
Analgaesia		
16. Pain level	Comfort with minimal sedation	HR, LOP, palpation
Nutrition		
17. Body weight Total protein Nitrogen balance 18. Glucose homeostasis	Stable body weight, <5% loss TP > 40 g/L Positive nitrogen balance Glucose 4 - 8 mmol/L	Weigh daily TP Protein in – urine urea Glucose
Nursing		
19. Hygiene and patient mobilisation 20. Wound care and dressings 21. TLC	Clean, dry, moderate mobility Clean, effective barrier Overt affection	Skin, hair, muscle tone Catheter, incision sites Attitude

(TO BE CONTINUED IN NEXT ISSUE OF PPAM)

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Article

The Role of Nutritional Interventions in Dermatological Conditions

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The skin can provide cues and clues to underlying systemic health. The appearance of the skin and hair coat is influenced by the nutritional intake of an animal. The skin can develop lesions secondary to nutritional deficiencies; however, this is very uncommon in a healthy animal that has a good appetite and is being fed adequate amounts of an appropriate food. A number of skin diseases are managed with nutritional alterations in the actual dietary ingredients fed to the animal or the addition of supraphysiologic supplementation of certain dietary elements. In This article will discuss those dermatologic diseases or conditions that are the result of nutritional deficiencies or managed by changes in diet or nutritional supplements.

Nutrients that can result in cutaneous manifestations, should marked deficiencies occur, include protein, essential fatty acids, zinc, copper, vitamin A, vitamin B complex, and vitamin E as in table no.1. Dermatologic conditions associated with nutritional deficiencies are uncommon if the animal is being fed a diet that meets the nutritional needs for that individual. Some cutaneous manifestations of nutritional deficiencies in dogs are recognized in particular breeds, suggesting perhaps an alteration in absorption or metabolism within those individuals, while others have been linked to inadequate or unbalanced diets.

Protein

Protein deficiency can occur and affect the skin if an animal is consuming a very low protein diet, experiencing a severe catabolic process, or enduring a period of starvation. The skin has high needs for protein and energy. Hair is 95% protein, and hair growth can utilize up to 30% of the daily protein intake (Scott *et al.* 2001b). The skin has high needs for protein and energy. Hair is 95% protein, and hair growth can utilize up to 30% of the daily protein intake (Scott *et al.* 2001b). Certain amino acids are particularly important for the growth or production of normal hair or skin. Hair contains large amounts of the sulfur containing amino acids, methionine, and cysteine. Cysteine can form disulfide bonds to form cystine, which is a major constituent of hair as several of the keratin-associated proteins in hair fibers contain high amounts of cystine (Shimomura *et al.* 2003). Tyrosine is an important precursor for the production of melanin and normal production of the eumelanin and pheomelanin found in hair (Yu *et al.* 2001).

Animals with protein deficiency have scaling, loss of hair pigment, and patchy alopecia. Animals that are ill or have metabolic stress may suffer from anagen or telogen defluxion that may in some cases be the result of inadequate amounts of protein and energy during these periods. Anagen defluxion or effluvium results in alopecia when hairs that are in the anagen stage of growth are lost or damaged. This can occur with certain metabolic disorders, endocrinopathies, and the administration of antimitotic drugs. Telogen defluxion or effluvium occurs when there is a sudden growth arrest of numerous anagen follicles and then synchronization of these follicles into telogen. Causes of telogen defluxion include severe illness, high fever, physiologic shock, surgery or anesthesia, or

Dietary Deficiency	Skin Lesions
Protein	Scaling, patchy alopecia, thin brittle hair shafts, loss of hair pigment, decreased wound healing.
Essential Fatty Acids	Mild scaling, lack of luster to coat, with chronicity skin thickens and becomes greasy.
Zinc	In dogs, erythema, scaling, adherent scaling and crusts develop around mucocutaneous junctions and pressure points
Copper	Hair depigmentation and rough, dull hair coat.
Vitamin A	Scaling, follicular hyperkeratosis, dull hair coat.
Vitamin E	In cats, steatitis: firm, nodular, painful subcutaneous swellings.
Vitamin B Complex	Dry hair coat with scaling: cheilosis with riboflavin deficiency.

Table No. 1 : *Dermatologic Signs Associated With Nutritional Deficiencies*

pregnancy. Typically over a 1- to 3-month period after the insult, the majority of hairs from these follicles are shed as a new hair follicle cycle begins. Increasing the animal's consumption of high-quality protein sources should resolve the cutaneous signs if there is no underlying complicating disease process.

Essential fatty acid

Polyunsaturated fatty acids (PUFAs) are needed to maintain normal structure and function of the skin. Essential fatty acids (EFAs) are polyunsaturated fatty acids that must be acquired from the diet as the animal cannot synthesize them. Depending on the species, the EFAs include the omega-6 (n-6) fatty acids, linoleic (LA), and arachidonic (AA) acids. Cats cannot biotransform LA to AA, and thus for cats AA is also an essential fatty acid. The omega-3 (n-3) PUFA alpha-linolenic acid (ALA) n-3 is not an essential fatty acid. In addition, dogs cannot effectively convert ALA to docosahexaenoic acid (DHA) (Dunbar et al. 2010), so algal/fish oils, rather than seed oils, are a better source if long-chain n-3 fatty acids are desired (Bauer *et al.* 2006). Eicosapentanoic acid (EPA) is another long-chain omega-3 PUFA that is found in high amounts in marine fish oil. EFAs have multiple functions in the skin and are involved in the synthesis of prostaglandins and leukotrienes, and they affect the fluidity of the phospholipid cell membrane (Kwochka 1993). EFAs, particularly linoleic acid (LA) are an important component of ceramides, which are necessary in maintaining the cornified lipid envelope or skin barrier.

Arachadonic acid can influence epidermal proliferation via the production of prostaglandin E2. The skin is an active lipid synthesizing and metabolizing organ with a large membrane store of AA, but the skin cannot convert LA to AA as it lacks the enzymes required to perform the necessary elongation. The decrease in AA may also result in a decrease in prostaglandin E2 and resultant epidermal proliferation. Clinically, in early EFA deficiency a fine scaling is observed with a loss of luster and sheen of the hair coat. Chronic EFA deficiency results in skin thickening with greasiness, particularly in the ears and intertriginous zones. The diagnosis is confirmed by response to EFA supplementation either by feeding a better quality diet with higher fat content or administration of a veterinary fatty acid supplement. A better quality dog food is preferred as it will also meet all nutritional needs for vitamins and minerals. Response is typically rapid with improvement seen within 4 to 8 weeks.

Zinc

Zinc is an important dietary element for the development of normal epithelialization (Watson 1998). It serves as a cofactor in numerous transcription factors and enzyme systems including RNA and DNA polymerases, and it is therefore very important in tissues, such as the skin, that frequently undergo cell renewal. Zinc-dependent matrix metalloproteinases are involved in keratinocyte migration and wound healing. The skin contains approximately 20% of the total body zinc stores, and the highest concentrations of zinc are found in the keratinized tissue of the nasal planum, tongue, and footpad in dogs (Lansdown and Sampson 1997). There are a number of recognized syndromes associated with either zinc deficiency or disturbances in zinc assimilation that present with cutaneous signs. There are two syndromes of zinc responsive dermatosis seen clinically in the dog. Syndrome I has been identified in Siberian Huskies, Alaskan Malamutes, and occasionally other breeds. These dogs are speculated to have a genetic defect in the intestinal absorption or the metabolism of zinc. In Malamutes it has been shown that a decreased capability for zinc absorption from the intestine exists in those dogs affected with chondrodysplasia (Brown *et al.* 1978). Skin lesions develop despite adequate consumption of diets with sufficient zinc. Syndrome II occurs in rapidly growing puppies that are often being fed a poor-quality dog food that is deficient in zinc, a cereal or soy diet with high amounts of phytates, or are oversupplemented with calcium (Watson 1998). These juvenile dogs are thought to have a relative zinc deficiency caused by a combination of low zinc intake and/or the effects of excessive calcium or phytate from the diet that interferes with zinc absorption. Affected dogs with syndrome I typically show crusting, scaling, and alopecia around the facial mucocutaneous junctions—especially the eyes, mouth, and ear margins. Elbows, pressure points, and footpads may also be involved. Lesions begin with erythema, progressing to alopecia with fine silver scaling, which may become adherent or crusted with suppuration. They are usually well demarcated and unilateral at first, but tend to become symmetrical as the disease advances. Therapy requires zinc supplementation with a recommended dosage of 2–3mg/kg of body weight of elemental zinc in the form of zinc sulfate, zinc gluconate, or zinc methionine (White *et al.* 2001). Although zinc when fed as a zinc-amino acid chelate (such as zinc methionine) is thought to be more bioavailable, that may be most important when there are diet or physiologic conditions that limit zinc availability or increase the need for it (Roudebush and Wedekind 2002). Clinical signs are typically improved within 4 to 6 weeks.

Affected female dogs often respond to lower dosages of zinc after being spayed, suggesting that zinc needs

are greater during estrus or that zinc and estrogen compete for carrier proteins (White *et al.* 2001). In both syndromes of zinc responsive dermatosis, fasting and postprandial concentrations of serum triglycerides have been shown to be significantly lower in successfully treated dogs compared with normal dogs (van den Broek and Simpson 1992). EFA deficiency impairs zinc absorption, and supplementation with EFAs appears to enhance zinc absorption (White *et al.* 2001). Response to zinc supplementation is dramatic in Syndrome II zinc deficiency but is often not needed once the dog has reached maturity, unlike dogs with Syndrome I zinc deficiency. Many Syndrome II dogs will respond to simply feeding a better quality diet.

Copper

Copper is required for melanin production and keratin synthesis. Copper deficiency is unlikely, as commercial diets contain adequate copper but supplementation with other minerals such as zinc or calcium could cause imbalances. Cutaneous lesions seen with copper deficiency include hypopigmentation with a dull rough haircoat (Scott *et al.* 2001d).

Vitamin A

Vitamin A (retinol and its derivatives) has many physiologic functions and is involved in the regulation of cellular growth and differentiation. It is essential to maintain the integrity of epithelial tissues and is particularly important for the keratinization process. Both deficiency and excess of vitamin A can give rise to cutaneous lesions of hyperkeratinization and scaling, alopecia, poor hair coat and increased susceptibility to microbial infections. (Scott *et al.* 1995). Hyperkeratinization of the sebaceous glands can result in occlusion of their ducts and the formation of firm, papular eruptions. Cats require a dietary source of preformed retinol because, unlike dogs, they are unable to utilize the retinol precursor, b-carotene (Brewer 1982). Nevertheless, vitamin A deficiency is rare in companion animals, and a toxicity state, with its accompanying skeletal changes, is more likely to occur. Hypervitaminosis A is seen predominantly in cats that are fed large amounts of liver or after prolonged oversupplementation of the diet with vitamin A or cod liver oil.

Vitamin A responsive dermatosis is a rare skin disease seen predominantly in Cocker Spaniels (Ihrke and Goldsmith 1983). It is an adult onset cornification disorder in which dogs present with multifocal, well-demarcated, erythematous, alopecia plaques with thick adherent scale most often located on the ventral abdomen and thorax. Hair shafts are often entrapped and clumped by keratinaceous debris. Overall the hair coat is dull. Histologically, severe follicular hyperkeratosis is evident and this is highly suggestive for the diagnosis (Gross *et al.* 2005). Despite being fed a nutritionally balanced diet, these dogs require supraphysiologic supplementation with oral vitamin A at 600 to 800 IU/kg of body weight/day. Clinical improvement is typically seen in 6 to 8 weeks. Some degree of lifelong supplementation with vitamin A is often needed. High doses of vitamin A are likely to have some degree of a suppressive effect on cornification in these dogs and slow the epidermal turnover time.

Vitamin E

Vitamin E is an antioxidant and is important in maintaining stability of cell membranes. Working with glutathione peroxidase and selenium, vitamin E is capable of protecting cells against the adverse effects of reactive oxygen and other free radicals that initiate the oxidation of polyunsaturated membrane phospholipids. Pansteatitis is associated with diets that are low in vitamin E and high in polyunsaturated fats. A diet comprised entirely of raw oily fish is a classic example. Cats with pansteatitis develop firm painful swellings associated with the inguinal and abdominal fat pads. The swellings result from the inflammation associated with the peroxidative damage of adipose tissue. Correcting the dietary deficiency with vitamin E supplementation will improve clinical signs. Experimentally induced vitamin E deficiency has been reported in dogs to cause a cornification disturbance that is initially a dry scaling that becomes more inflamed with erythema, skin thickening and increased greasiness (Scott and Sheffy 1987). Cutaneous signs resolved within 10 weeks of feeding a diet with adequate vitamin E supplementation.

Vitamin B Complex

The B vitamins are water soluble and are involved as cofactors in a number of metabolic pathways.

Biotin deficiency can result in facial and periocular alopecia in dogs that can progress to more generalized crusting lesions (Scott *et al.* 2001d; Watson 1998). In the cat, generalized dermatitis with crusted papules has been described (Scott *et al.* 2001d). Biotin deficiency can occur if the diet contains high amounts of uncooked egg whites, which contain avidin, which binds biotin.

Riboflavin deficiency can cause a dry, scaling dermatitis around the eyes and the ventrum and a marked cheilosis in dogs (Lewis *et al.* 1987). However, riboflavin deficiency is unlikely if the diet contains any meat or dairy products.

Niacin deficiency results in pellagra, which is characterized by ulcerated mucous membranes, diarrhea, emaciation, and in some dogs, pruritic dermatitis of the ventral abdomen and hind legs (Scott *et al.* 2001d). Niacin deficiency is possible if a diet low in animal protein and high in corn is fed. Corn is low in tryptophan, which is required for niacin synthesis in dogs.

Pyridoxine deficiency has only been seen in an experimental setting in cats. The cats developed a dull, waxy, hair coat with generalized scaling and focal alopecia involving the face and extremities (Norton 1987; Scott *et al.* 2001d).

Conclusion

In conclusion, while true nutritional deficiencies leading to dermatologic conditions are rare in healthy pets fed balanced diets, inadequate or unbalanced nutrition can manifest as distinct skin and coat disorders. Key nutrients such as protein, essential fatty acids, zinc, copper, and vitamins A, E, and B-complex play critical roles in maintaining skin integrity. Early recognition of deficiency-related signs and timely dietary correction or supplementation can lead to significant clinical improvement and overall better health outcomes.

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Appeal to Members

CONTRIBUTE TO THE PPAM BULLETIN

Dear PPAM Members,

The strength of the Pet Practitioners' Association of Mumbai (PPAM) lies in the active participation and sharing spirit of its members. The PPAM Bulletin is your platform, and we invite you to make it more vibrant, diverse, and meaningful.

We appeal to all members to share:

a) Your thoughts and reflections on the veterinary profession. b) Clinical articles or case reports from your practice. c) Suggestions and ideas on how PPAM can grow stronger and move forward. d) Experiences, concerns, or challenges faced in the profession e) Innovative approaches and success stories worth sharing with peers. All contributions may be mailed to: editordrvishwasrao@gmail.com.

Selected writings will be included in the next issue of the PPAM Bulletin. Your voice matters. Let us learn from each other, inspire one another, and work together for the progress of our profession and our association.

Warm regards,
Editor – PPAM Bulletin

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SCAN TO KNOW MORE

The Essentials of Veterinary Diagnosis: Beyond Just Data and Tests

Dr. Madhura S. Vishwasrao and Dr. Shriniwas V. Vishwasrao

The Art of Veterinary Diagnosis" is more than a scientific process – it is a thoughtful blend of clinical knowledge, human intuition, careful observation, and empathy.

Diagnosis Is More Than Just Data

Veterinary diagnosis is not just about interpreting lab reports or imaging. It begins with:

- Careful history-taking
- Detailed clinical examination
- Thoughtful pattern recognition
- And most importantly, listening to the pet parent

The Clinician's Mind Is the First Tool

Before tests, scans, and technology, the clinician's senses and judgment are the first instruments:

- Seeing the subtleties in posture, pallor, or expressions
- Hearing the hidden clues in breathing
- Feeling temperature changes, tension, or tenderness

These "soft signs" often guide the direction of formal investigation.

Pattern Recognition vs Analytical Reasoning

Diagnosis involves two key cognitive strategies:

- Pattern recognition: "I've seen this before" – fast, intuitive
- Analytical reasoning: Step-by-step deduction – essential for complex or rare cases

The art lies in knowing when to trust your gut and when to slow down and analyse.

Symptoms Are Stories, Not Just Signals

Each symptom reflects a biological problem.

A good diagnostician:

- Hears what is said, but also what is not said
- Considers the context
- Connects pet parent narratives to clinical frameworks

Diagnostic Humility Is Key

- Not every case will be clear-cut
- Medicine evolves – and so must our thinking
- Keeping an open mind and revisiting possibilities is a mark of wisdom

As the adage goes: **"When you hear hoofbeats, think horses – but don't forget the zebras."**

Empathy Sharpens Diagnosis

Compassion is not a distraction – it is a diagnostic tool:

- Pet parent opens up more when they feel heard
- Subtle signs are more apparent in an empathetic environment
- Trust improves compliance and outcomes

Conclusion: The art of veterinary diagnosis lies not only in identifying what is wrong – but also, in understanding the type of illness, why is the pet suffering, and how best we can help.

Notice to Members

Dear Members,

In our effort to promote eco-friendly practices and reduce printing costs, PPAM is pleased to offer the option of receiving the PPAM Bulletin in e-copy (digital format).

Members who wish to receive the Bulletin in e-copy only are requested to kindly convey your preference by email to editordrvishwasrao@gmail.com. Your cooperation will help us move towards sustainability while ensuring you continue to stay updated with all PPAM news and academic content.

Warm regards,
Bulletin Editor, PPAM

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