Chapter 07

Homeopathic Medicines for Treating Various Diseases of Bovine

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ABSTRACT

Homeopathy is a substitutive and a different approach to medicine founded on the idea that natural elements, when processed carefully and usually in very little doses, cure diseases and maintain health. It is derived from two Greek words and is used worldwide. Despite its vast distribution, it is still considered controversial in some areas. Oral use of medicines has more beneficial and early effects as compared to external use. Nosodes, sarcodes, plants and minerals are the common sources of these medicines. Belladonna, calcarea phos, five phos, cicuta virosa, stramonium and nux vomica are the common homeopathic medicines. Calcarea phos found to be very effective in the treatment of parturient paresis. Five phos are largely used to accommodate mineral deficiencies in animals. Cicuta virosa treats the nervous form of ketosis in an effective way. Stramonium is used to control fits and convulsions. Nux vomica has a wonderful effect in the treatment of bloat. Mercurius. Solubilis is highly recommended for pustules and blisters. It has a vast future because it is cheaper and easily available. It covers a lot of diseases in single treatment and has long term effects and has a potential to prevent future illness.

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INTRODUCTION

Homeopathy is derived from 2 Greek words 'homoios' meaning 'similar or same' and 'pathos' meaning 'suffering' (Kozat, 2022). The word 'homeopathy' was first used in history in 1807. Basically, homeopathy is the idea of 'let like be cured by like'. In 1796, Samuel Christian Friedrich Hahnemann, a germen physician used this concept of treating like by like. The concept of homeopathic medicine became popular in the 19th century and in the 20th century it became the most popular idea. In the early 21st century, homeopathy became known to the most parts of the world. But in many parts of the world, homeopathy is considered controversial due to the use of more diluted medicines. There exists a concept that homeopathic medicine has a placebo effect, but many trials, research, and meta-analysis have proved that homeopathy does not have placebo effects. The placebo refers to a dummy treatment which does not have any actual effect but appears to improve a patient's health (van Lennep et al., 2021). According to some researchers, use of homeopathic medicine is equally effective in humans and in animals (small, large, and pet animals). Despite the long controversial history of homeopathy, it has been proven effective in every aspect. Many institutes are currently working on homeopathic medicine. Homeopathy is now worldwide distributed. But there is a lot more to reveal about homeopathy.

Administration of Homeopathic Drugs

The homeopathic drugs can be used both externally and internally (Nicol, 2021). For better results, these also should be taken orally, ideally 15 to 30 minutes before or after the feeding schedule.

Internal use:

The following varieties of homoeopathic drugs are available for internal use:

1- Potentiated dilutions

Vehicles such as disks, globules, or pellets that can be soaked in the dilutions and stored in marked bottles are used to dispense potentized dilutions (O'Connor, 2024). The globules can be given to sick animals as food or as a drink. To ensure

that the medications' potency lasts for months or even years, keep them away from heat sources and light. The medication is absorbed when the medicated globules are applied directly to the tongue and dissolve in saliva. It is not required to take a homoeopathic medication orally. The ability of homoeopathic medications to be absorbed by the tongue or palate gives them an edge over allopathic medications (Jain, 2022). Although it may seem laborious at first, with some practice, the attendants will become skilled at administration.

2- Mother Tinctures

Ten drops of tincture should be combined with clean, cold water and poured into bottles to saturate large animals, such as horses and cattle (Madrewar, 2003) Before using the bottle on other animals, it should be thoroughly cleaned. Dogs, pigs, sheep, and goats are among the small animals that require five drops of tinctures.

3- Triturated Pills or Powder

Triturates or pellets can be fed to animals in combination with feed or applied dry to their tongues (Ubhe and Gedam, 2020). For large animals, the dosage rate of the powders is two grains; for small animals, it is one grain.

External use

Very few ointments and lotions are made with homoeopathic medicines. To make lotions for external use, combine half a glass of pure water with one scoop of mother tincture.

1- Rhus toxicodendron

With rheumatism, it is very beneficial for sprains and injuries to tendons, ligaments, membranes and joints (Kearns, 2021).

2-Arnica Montana

Beneficial for blows, falls, contusions, and other mechanical injuries. When applied promptly to bruising-related stiffness, swellings, and discomfort, it helps to stop more tissue damage. Its use on surgical wounds has shown to be quite beneficial. Areas that have been bruised are cleaned using a cloth dipped in lotion or lint (Madrewar, 2003). Merely covering the injury with a desiccated cloth will stop the medication from vanishing. For bruising, contusions, collar galls, or other external inflammatory conditions caused by repeated blows or friction, arnica lotion works well. Be careful not to apply this on freshly cut surfaces.

3-Calendula Officinalis

It helps stabs, cuts, and wounds when granulation healing is required since the tissue is ripped (Singh et al., 2022). Additionally, it stops bleeding and eases excruciating pain from accidents.

Sources of Homeopathic Medications

1- Animal sources: Naja tripudians, Lachesis and Coccus spp. (A'Grade, 2022).

- 2- Minerals: It includes organic and inorganic substances, metals, minerals, iron, phosphorus and sulphur etc.
- 3- Plant sources: Calendula, Arnica, Bryonia, Aconite napellus etc.
- 4- Imponderabilia

5- Sarcodes: Specific secretions and tissues from healthy animals are utilized such as sheep thyroid extract (Thyroidinum) and internal suprarenal gland secretion (Adrenalin).

6- Nosodes: Pathological products, viruses, bacilli, and human or animal sources can all provide nosodes (Combrink-Potter, 2020).

Homeopathy in the Treatment of Metabolic Diseases

1- Parturient Paresis

Parturient paresis, also known as hypocalcemia or milk fever, is a metabolic disease of dairy cattle which commonly occur at the time of parturition (Bzuneh et al., 2020). Hypocalcemia will occur which causes afebrile, acute to per acute, flaccid paralysis and circulation collapse in cows. It also occurs after parturition.

Etiology

Dairy cattle are at great risk for milk fever when attained their highest productivity (Bzuneh et al., 2020). Gradual increase in calcium excretion (10- 30g per day) takes place which imbalances calcium homeostasis. As a result, concentration of calcium in the blood falls below the normal range (8.5mg/dL). Cases in the late lactational period are also seen. Hyperexcitability of the nervous system leads to decreased contraction of muscle and ultimately paresis occurs. Milk fever can occur at any age but Guernsey and Jersey breeds are more susceptible (Madrewar, 2003).

Symptoms

Milk fever has three apparent stages:

1- Stage 1

Cows are in a standing position but unable to eat and move. Hyperexcitability can be seen. Stiffness of flanks and triceps may occur. Shaking of head and ear twitching may also be seen. Restlessness occurs and animals fall easily. If proper treatment is not provided in stage one then it progresses towards the second stage (Daresjö, 2020).

2- Stage 2

Also termed as the stage of sternal recumbency. Animals are unable to stand. Dry muzzle, extremities become cold and subnormal rectal temperature are the typical signs. Tachycardia and paralysis of smooth muscle occur. Animals are unable to urinate and constipation can also be seen (Daresjö, 2020).

3- Stage 3

This stage is also termed as phase of coma or paralysis. The muscles become extremely flaccid. There is a sharp increase in the heart rate (above 120bpm) and animals may have severe bloat. At this stage, animals survive only for a few hours if left untreated (Daresjö, 2020).

Treatment

Subcutaneous and intravenous administration of calcium can be used for successful recovery in most of the cases (Ibrahim and Kirmani, 2021). The homeopathic drugs work very effectively to prevent the danger of relapse and avoid complexities of the nervous system. These drugs provide complete prevention of disease near parturition.

1- Calcarea phos 1M: One dose two times a day for 3-5 days is recommended. It is a tribasic pellet used in acute cases of milk fever.

2- Magnesium phosphoricum 30: One dose with a gap of half an hour for three days is given to compensate the deficiency of magnesium.

3- Belladonna 1M: One dose with the gap of an hour for three doses is given. It contains anticholinergic alkaloids which are used to reduce the excitement of animals.

- 4- Stramonium 200: One dose with the gap of an hour is recommended when nervous signs start to appear.
- 5- Cuprum metallicum: It is used to reduce muscular cramps and helps in recovery.
- 6- Nux vomica 30: If an animal is facing indigestion after the recovery, then nux vomica is given.
- 7- Bryonia 30: Recommended when chest symptoms start to appear.
- 8- Five phos 30: To accommodate the mineral deficiencies, a weekly dose of five phos 30 can be given to retain minerals.

2- Ketosis

Ketosis is a common metabolic disease of cattle (Zhang and Ametaj, 2020). It is an early lactational disease marked by hypoglycaemia, ketonuria, ketonaemia, decrease in milk production and reduced feed intake. It occurs rarely in late gestation.

Etiology

The exact cause of ketosis is not completely understood. In the early lactation, fat mobilization occurs due to negative energy balance and high glucose demand being produced due to milk synthesis (Lei and Simões, 2021). As a result, the glucose concentration decreases while the non-esterified fatty acids in the serum increases. Ultimately ketosis develops.

Types of Ketosis

Type I Ketosis

This type of ketosis occurs for 4-6 weeks after parturition. During this time, animal has achieved its peak milk production (Lei and Simões, 2021).

Type II Ketosis

This type of ketosis occurs 1-2 weeks after parturition. It may be linked with the fatty liver (Zhang and Ametaj, 2020).

Clinical Signs

Ketosis occurs in two clinical forms:

Nervous Form

Nervous ketosis is typically manifested by nervous dysfunction which includes incoordination, abnormal licking, pica, aggression and typical head shaking (Manzoor et al., 2021).

Digestive Form

Inappetence is the typical sign of digestive ketosis. Lethargy, reduced milk production and tucked up abdomen are seen in stalled animals. Animals become dehydrated and afebrile. Ruminal motility is absent or variable. Grinding of teeth may be observed. Manure becomes dry. In rare cases, no clinical signs may be found on examination (Huizenga, 2021).

Treatment

- 1- *Cicuta virosa* 30: One dose with the gap of two hours for the total 4 doses is given and works effectively in nervous form.
- 2- Aconitum 12: One dose with a gap of one hour for the total 3 doses is given. In the early stages of nervous form, it provides relief to the animal.
- 3- Five phos+Alfalfa 30: 5 globules of this combination thrice a day gives good results in both nervous and digestive forms.
- 4- Stramonium 200: One dose with a gap of an hour is suggested to control convulsions and fits.
- 5- *Nux vomica* 1M: Daily dose will retain normal digestion and treatment will continue for 5 days. Usually administered after Lycopodium.
- 6- Opium 200: 2 doses with a gap of 2 hours will relieve depression in animals.
- 7- Lycopodium 1M: Daily dose proves to be a good remedy for eliminating digestive signs. It exerts a tonic effect on liver, retains glucose level in the blood and regulates glucose function (Ghosh et al., 2021).

Homeopathy in the Treatment of Bacterial Diseases

1- Mastitis

It is inflammation of the mammary gland characterized by swelling, pain, heat and induration of the udder (Qureshi et al., 2023). Different physical, chemical and pathological changes occur in the gland which in return causes changes in the milk. These alterations include blood clots, changes in milk colour and increase in leuckocytes. The organisms which are responsible for mastitis are called mastitogens. Their classification is as follows:

- 1- Environmental mastitogens: Streptococcus fecalis, Streptococcus uberis, E. Coli, Klebsiella species etc. (Nathawat et al., 2020)
- 2- Contagious mastitogens: Mycoplasma bovis, Staphylococcus aureus, Pasturella species etc.
- 3- Endogenous mastitogens: Mycobacterium tuberculosis, Mycobacterium bovis, Leptospira species.
- 4- Opportunistic mastitogens: Staphylococcus epidermidis, Staphylococcus hyicus (Emrobowansan and Hosua, 2022).

Clinical Signs

Symptoms can occur in three forms:

- 1- Acute form: It suddenly occurs after parturition. Colour and consistency of milk suddenly changes after parturition.
- 2- Subacute form: These are generally caused by *Staphylococcus* species. Changes in the colour and consistency are persistent, but inflammation is mild.
- 3- Chronic form: In chronic form, teat fibrosis occurs, and milk secretion is reduced. Fever is absent and there will be recurrent attacks (Cobirka et al., 2020).

Treatment

- 1- *Apis mellifica* 30: One dose with a gap of 3 hours for the total 4 doses is recommended. This drug is given when oedema of udder is suspected in heifers.
- 2- Bryonia Alba 30: One dose with a gap of half an hour for the total 4 doses is recommended when udder becomes indurated and hard, showing symptoms of pain. While in chronic form, teat fibrosis occurs, and this drug will be continued for one month.
- 3- Bellis perenis 30: One dose thrice a day for 4 doses is given when teats become deeply injured.
- 4- Aconite 30: One dose with the gap of half an hour for a total of 6 doses is given. Highly recommended in acute cases when cows are affected by cold or dry winds.
- 5- Arnica 30: One dose thrice a day for a total of 3 doses is highly recommended when blood appears in milk after injury.
- 6- Belladonna 1M: One dose with the gap of an hour for a total of 4 doses helps to prevent mastitis which develops after parturition.
- 7- Ipecac 30: It is also recommended in udder bleeding when milk has a pinkish ting.
- 8- Hepar sulphuris: Helps to prevent mastitis caused by *Corynebacterium pyogenes*. It works effectively by draining out pus from udder.
- 9- Silica 200: It is also indicated in chronic mastitis especially in those cases where abscesses develop.
- 10- Phytolacca 30: Recommended when small clots start to appear, and milk becomes curdled.
- 11- Urtica urens 6: Indicated when plaques appear in the perineal region.
- 12- Sulphur 30+ carboveg 30: Highly recommended in both acute and chronic form. Especially in those cases when milk has a yellow ting (Morgans, 2020).

2- Tetanus

The causative agent of tetanus is *Clostridium tetani* (Popoff, 2020). It is an anaerobic bacterium which produces neurotoxins in the body. Bacteria enter into the body through deep punctured wounds. However, disease occurs rarely in cattle. Neurotoxins will be produced in anaerobic condition which is taken up by the motor neurons and travel to spinal cord, ultimately producing signs of tetanus.

Clinical Signs

The incubation period varies among the species. The stiffness of hind limb, neck and masseter muscles occur (Šoštarić et al., 2022). Head muscles become seized leading to lockjaw. Hyperesthesia and spasm become evident. In the initial stages, prolapse of the third eyelid occurs and in later stages, the animal will feel difficulty in swallowing and there is a sudden increase in respiration. Spasms develop which affect intercoastal muscles, diaphragm and larynx leading to pulmonary insufficiency. The autonomic nervous system will be greatly leading to hypertension, tachycardia and cardiac arrhythmias (Popoff, 2020).

Treatment

Apart from the administration of various antibiotics and antitoxins, following homeopathic drugs can be given:

- *Ledum palustre* 30: One dose with the gap of one hour for a total of 5 days can be given in case of deep wounds which have become cyanotic.
- Hypericum 1M: In the case of deep punctured wounds, one dose with the gap of one hour for a total of 5 doses is given.
- Strychninum 200: It can be given to relieve muscle rigidity.
- Colchinum 200: It can be given in combination with *Nux vomica* to relieve bloat.
- Cuprum met 1M: It is used to relieve spasms and cramps when wounds become deep.
- Nux vomica 1M: It is used when digestive symptoms appear such as bloat (Van Hao et al., 2021).

3- Anthrax

It is a non-contagious disease caused by spore forming bacteria *Bacillus anthracis* (Apriliana et al., 2021). It is characterized by septicemia and sudden death. Splenomegaly, incomplete rigor mortis and dark tarry blood are the important postmortem findings. The rectal temperature raised up to 105-108 °F.

Treatment

Anthrax has three forms: Peracute, acute and chronic.

- Arsenic 1M: Give good results in peracute form.
- Lachesis: Recommended when eyes colour change and blood appears in manure.
- Echinacea: Give good results in the third stage of disease.

Homeopathy in the Treatment of Viral Diseases

1- Foot and Mouth Disease

FMD is a highly contagious and transmissible disease of cloven-footed animals. The causative agent of FMD is *Aphthovirus* belongs to family *Picornaviridae*. As the name indicates, it is the disease of food and mouth and commonly found in buffalo, cattle, sheep and goat in Pakistan. There are 7 serotypes of this virus which are: A, O, C, Asia-1, SAT 1, SAT 2 and SAT 3. It is present worldwide and characterized by formation of vesicles in the feet, teats, mouth and muzzle. Virus is transmitted by direct contact and various secretions and excretions of animals (Azeem et al., 2020).

Symptoms

After getting entry into the body, the virus replicates in the mucosa of larynx and pharynx and distributed throughout the body by the lymphatic system. The incubation period depends on the serotype, environment, host and route of entry. Initially, fever develops followed by vesicle formation in the feet, teats, tongue, dental pad, hard palate, lips, coronary band and muzzle of infected animals. Lameness, restlessness, grinding of teeth, shaking of head and reduction in milk productivity are the initial symptoms. Rupture of vesicles leads to secondary bacterial infection, which then develops into deep ulcers. Mastitis commonly develops due to vesicles in infected teats. Hoof may fall off in extreme complicated cases. Bloody saliva, bad breath, swollen face, purging and secondary bacterial infections ultimately lead to death (Yi et al., 2022).

Treatment

- 1- Rhus toxicodendron 30: This drug is recommended in pain, mouth redness and lameness of foot.
- 2- Arsenicum 30: Recommended for the onset of disease.
- 3- Ferrum phos 30: Give support to animals in febrile condition.
- 4- Natrum muriaticum 30: Given when animals become weak and dehydrated due to salivation and high temperature.
- 5- Mercurius solubilis 30: Highly recommended in extreme conditions like bloody discharges, deep ulcers and blisters etc.
- 6- Five phos 30+ Alfalfa 30: It helps in recovery and restores normal production.
- 7- Borax 30: Recommended when stomatitis develops (Wang et al., 2020).

2-Blue Tongue

Blue tongue, also known as muzzle disease, is a non-contagious and insect born viral disease that occurs rarely in cattle (Rivera et al., 2021). The causative agent of BTV is *Orbivirus* belongs to the family *Reoviridae*. 29 serotypes of BTV have been identified and are present worldwide.

Clinical Signs

Clinical signs occur rarely in cattle and limited to oral vesicles, stiffness, salivation, lacrimation, hyperesthesia and dermatitis. Abortion may occur and malformations can lead to porencephaly. Postmortem leisons include edematous and ulcerated skin and ulcers in mouth. There is no specific treatment and main prevention is through the control of vectors (Vinomack et al., 2020).

Treatment:

- 1- Natrum mur 30: One dose with the gap of an hour for the total 5 doses is recommended when there is persistent salivation.
- 2- Aconitum 30: Recommended in early stages of disease.
- 3- Nitric acid 30: One dose thrice a day is given when vesicle formation occurs at the opening of mouth and nostrils and gives a pungent smell.
- 4- Mercurius corrosivus 30: It is indicated in dysentery and bloody saliva.
- 5- *Mercurius solubilis* 30: One dose with the gap of half an hour for a total 6 doses is indicated when vesicles form in the buccal cavity.
- 6- Arsenic alb 30: Recommended in all types of cases especially when tongue become purple due to swelling.
- 7- Calendula lotion: Indicated for the vesicles of hoof.
- 8- Borax 30: Indicated in mouth bleeding.
- 9- Rhus toxicodendron 30: Recommended to reduce lameness and inflammation of hooves (Bumbarov et al., 2020).

Homeopathy in the Treatment of Protozoal Diseases

1- Anaplasmosis

- 1- Phosphoricum 1M: One dose daily is recommended. It prevents the destruction of liver cells.
- 2- Crotalus horridus 1M: One dose with a gap of two hours is given in acute condition.
- 3- Trinitrotoluene 30: One dose with the gap of 3 hours for the total 4 doses is given in anemic conditions and to increase heart rate.
- 4- Phytolacca 30: One dose daily is recommended to restore normal functions in the body.
- 5- China 30: One dose two times a day will help to regain the strength of the body (Atif et al., 2021).

Disease	Prescription	Description	References
Abscess	Hepar sulph	Abscess that commonly develops in various body sections	(Ghosh et al., 2024)
	Rhus tox	Parotid gland abscess	
	Calcarea sulph	Abscess close to rectum	
Anemia	Nux vomica	Anemia due to haemorrhages	(Pandharkar and
	Crotalus	For Addison's anemia	Thote, 2021)
	Arnica	Anemia due to haemorrhages	
	Ferrum met	When an animal becomes pale due to fever	
Bites	Cedron	Snake bite	(Sunderraj, 2023)
	Lach	Dog bite	
	Urtica U	Bee sting	
	Natrum mur	Insect bite	
	Ledum	Scorpian bite	
	Hypericum	Cat, dog and rodent bite	
Cough	Belladonna	For dry cough and sore throat	(Akbar and Akbar,
	Drosera	For hollow, deep and chronic cough	2020)
	lodium	For tracheal cough and laryngeal cough	
	Kali phos	Cough due to irritation	
Fever	Sulphur	Fever due to viral infection	(Wrotek et al., 2020)
	Merc sol	Which occurs after vaccination	
	Echinacea	Which occurs after septic shock	
	Kali phos	Which occurs due to nervous shock	

Quick Prescription for Common Diseases

2- Babesiosis

- 1- Millefolium 30: One dose three times a day is recommended to compensate the severe blood loss.
- 2- Ficus religiosa 6: One dose three times a day is given. It is an anti- haemorrhagic agent use to cure respiratory symptoms.
- 3- China officinalis 6: One dose three times a day is given in anemic conditions to restore strength.
- 4- Cantharis 30: It is used to relieve the pain while defecation.
- 5- Phosphoricum 1M: It is used to control haemorrhages and especially used in those cases when jaundice is present.

- 6- Crotalus horridus 200: It also controls haemorrhages and prevent hemolysis of RBCs.
- 7- Belladonna 30: It is recommended when colour of urine changes to yellowish red.
- 8- Pulsatilla 30: It is recommended when colour of urine becomes dark.
- 9- Aconite 30 + Ipecacuanha 30: Give good results in combination to cure babesiosis (Renard and Ben Mamoun, 2021).

3- Toxoplasmosis

- 1- Cuprum 1M: It is used to relieve rigidity and muscle cramps.
- 2- Aconitum 12: Give good results in early stages of disease.
- 3- Lathyrus satius 200: It is used to overcome nervous signs such as paralysis and ataxia.
- 4- Conium: This drug is recommended when symptoms like incoordinated movements occur.
- 5- Stramonium 30: Recommended in convulsions and muscle twitching.
- 6- Belladonna: It is used to control hyper excitability in animals.
- 7- Strychninum 200: It is recommended in chorea-like conditions.
- 8- Phosphoricum 1M: It is recommended in pneumonia and other respiratory diseases which occur during the course of disease (Casoy et al., 2020).

Conclusion

There is growing interest in the application of homoeopathy as a supplemental or alternative to traditional veterinary care for the treatment of various diseases of bovines. Homeopathic medicine provides customized treatment to patients based on their distinctive signs and symptoms. Increased cooperation between conventional medical professionals and homoeopathic practitioners, resulting in integrated treatment modalities. Holistic approach of homeopathic drugs not only treats the symptoms but also the basic cause of the disease. Using homoeopathic treatments to treat both physical and mental health issues, such as stress, anxiety, and depression. Non-toxic behaviour of homeopathic medicines treats the animals in safe zone. Treating not the reported disease but also prevents the occurrence of other diseases in animals with long time effects. Use of homeopathic medicine also reduces the use of modern antibiotics and chemicals and promotes sustainable farming practices. Homeopathy has a vast future because it is cheaper and conventional and easily available in every country of the world. Digital platforms are being used more frequently for consultations, medication prescriptions, and educational resource access. In short, it is important for the veterinarian and farmers to use homeopathic remedies because it covers a lot of diseases in single treatment and animals become healthy for a long time because of its potential to prevent the future illness and having complete ingredients in required amount.

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