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TRADITIONAL SIDDHA FORMULATIONS EMPLOYED IN THE TREATMENT OF CATTLE DISEASES BY TRADITIONAL HEALERS IN DENKANIKOTTAI TK, KRISHNAGIRI DISTRICT

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ABSTRACT

Traditional medicine plays a greater role in the welfare of cattle as an integral part of traditional veterinary practices in rural communities. However the neglect relating to traditional practices especially the documentation of medicinal plants used in treating animal diseases remains a major concern. Evidence on the documentation of indigenous knowledge and biological evaluation of plants against cattle disease remains understudied and fragmented. This study deals with 32 ailments which were commonly found in the cattles and their treatment comprises of 60 medicinal plants belonging to 33 families that were found in all the vicinities of Denkanikottai. Majority of the people preferred traditional system of treatment while the rest followed modern veterinary treatments. Therefore the study recorded indigenous knowledge of traditional practice for cattle diseases and explored the Denkanikottai taluk.

Keywords: *Ethnoveterinary, Medicinal plants, cattle ailments, Traditional healers, Denkanikottai, Siddha*

INTRODUCTION

Ethnoveterinary medicine is a branch of science deals with prevention, control, diagnosis and treatment of diseases affecting the animals. This knowledge is acquired through practical experiences and traditionally passed from one generation to another generation. Cattle disease is one of the field which plays a central role in veterinary science. In siddha system of medicine, literary evidence strongly suggests there exists one such wing called Maatu Vaithiyam [1,2] (Traditional Practices for cattle diseases) which is equivalent to physician or surgeon in human medicine and the practice of this science is deficient. Immaculate Nabukenya et al stated that 44 plant species within 34 genera from 22 botanical families were identified in which 20 species were used against helminthosis and others were used to treat wounds, ecto-parasites, theileriosis, retained placenta and bovine ephemeral fever. Theileriosis and helminthosis were the most common diseases affecting cattle and goats.[3] Mirutse Giday et al stated that *Cissus quadrangularis* and *Solanum incanum* were the plants highly used to treat blackleg and respiratory tract problems.[4] Mohammad S Ali-shtayeh et al stated that *Camellia sinenses*, *Teucrium capitatum* and *Salvia fructosa* were used to relieve gastric disorders.[5] Therefore, this wing is not explored much in Siddha system and remains conundrum. So, the investigator tried to save the knowledge of traditional practices for cattle diseases from extinction by documentation and to bring these practices to the light.

AIM & OBJECTIVE

To document the Traditional knowledge, Medicinal formulations and Treatment procedures of Traditional healers incorporated in cattle diseases in and around Denkanikottai.

METHODOLOGY

Krishnagiri District was visited by periodic field trips for Ethno pharmacological exploration. During the survey, personal interviews and questionnaires were conducted with the Traditional healers who were practicing internal and external medicines in the treatment of cattle diseases. They were asked to come to the field for the identification of the plants with local names and shared their medicinal values with dosage. Photo documentation of medicinal plants and voice record documentation of the information shared by the healers were made.

RESULTS AND DISCUSSION

In Denkanikottai most rural community farmers depend on conventional health practices to preserve and improve their livestock health by preventing and managing their diseases. Denkanikottai taluk is enriched with flora and fauna which is not explored and remains hidden. Many traditional practitioners were practicing medicinal formulations since ages. They have learnt the art of practice from their ancestors. People living in the villages of Denkanikottai mostly prefer traditional practice rather than modern veterinary science. 10 practitioners were identified from this taluk in which 2 were female healers and 8 were male healers. Here the traditional practitioners prescribe herbal medicines to cattle diseases for a period of 3-5 days. About 32 Cattle diseases such as fever, dysentery, retained placenta, uterine prolapse, infertility, abortion, abscess, fracture, contusion, wound, ear ache, liver disorders, galactagogue, immunomodulator, laxative, scabies, not feeding, hematochezia, peptic ulcer, sneezing, chicken pox, indigestion, loss of appetite, bloating, snake bites, skink bites, karanai, dyspnea, cataract, rheum of eyes, cracks in teat and weight loss are treated in Denkanikottai. The most commonly reported diseases were fever, dysentery, fracture and chicken pox. Uterine prolapse, Retained placenta, Infertility & Abortion were reported as a specialized treatment by traditional healers in Denkanikottai. About 60 species were identified and documented in which Fabaceae, Amaryllidaceae and Piperaceae families were frequently cited. (Table 1) The most common used medicinal plant among them were *Allium sativum*, *Piper nigrum* and *Wrightia tinctoria*. Razina Rouf et al highlighted that *Allium sativum* strongly possess antiviral

property. [6] The above statement justified the use of it for chicken pox in cattles. Bosele Israel Moichwanetse et al stated Aloe vera cures retained placenta which supported its use in cattle diseases. [7]. Viswa Jyothi Bhal et al stated that cauterly can be used in Manual Small incision cataract surgery [8] which supported the use of this technique in animals for cataract.

Table 1. The use of medicinal plants in the treatment of cattle diseases

S.NO	DISEASES	VERNACULAR NAME	BOTANICAL NAME	FAMILY	PARTS USED	MODE OF USE
1	Dysentry	Perunkattukodi	Pachygone ovata	Menispermaceae	Root	The above ingredients are taken in equal ratio and made into red coloured decoction. A single dose of 100ml is given to the cattle for 3 days facing in east direction.
		Thuvarai	Cajanus cajan	Fabaceae	Peels	
		Kuthichedi	Waltheria indica	Malvaceae	Stem and root bark	
		Sirukathukodi	Cocculus hirsutus	Menispermaceae	Root and leaves	
		Kuthichedi	Waltheria indica	Malvaceae	whole plant	
2	Chicken pox	Kezhvaragu	Eleusine coracane	Poaceae	Seeds	They are grinded and a single dose is given internally for seven days.
		Vengayam	Allium cepa	Amaryllidaceae	Rhizome	
		Vettilai	Piper betel	Piperaceae	Leaves	The ingredients are grinded into a paste and applied on the tongue.
		Milagu	Piper nigrum	Piperaceae	Seeds	
		Seeragam	Cuminum cyminum	Apiaceae	Seeds	
		Thulasi	Ocimum sanctum	Lamiaceae	Leaves	
		Vembu	Azadirachta indica	Meliaceae	Leaves	
		Poondu	Allium sativum	Amaryllidaceae	Bulb	

		Cinna Vengayam	Allium cepa	Amaryllidaceae	Bulb	
3	Neck Abscess	Kodiveli	Plumbago zeylanica	Plumbaginaceae	Stem bark	Bark of Kodiveli (Plumbago zeylanica) is made into a paste and applied over the neck.
4	Uterine prolapse	Thottarsinungi	Mimosa pudica	Fabaceae	Leaves	Leaves are made into a paste and mixed with the colostrum or first milk.
5	Fever	Milagai	Capsicum annum	Solanaceae	Seeds	(i) The ingredients were smashed and made into a paste. The mixture is mixed with 100ml urine of female child and given to bull whereas the mixture is mixed with 100ml urine of male child and given to cow. (ii) The ingredients are smashed and mixed with warm water and given 100ml internally. (iii) The ingredients are grinded and mixed with child's urine and given internally.
		Poondu	Allium sativum	Amaryllidaceae	Seeds	
		Milagu	Piper nigrum	Piperaceae	Seeds	
		Vetpalai	Wrightia tinctoria	Apocynaceae	Leaves	
		Milagai	Capsicum annum	solanaceae	Seeds	
		Poondu	Allium sativum	Amaryllidaceae	Seeds	
		Milagu	Piper nigrum	Piperaceae	Seeds	
		Puli	Tamarindus indica	Fabaceae	Fruit	
		Kanja	Cannabis sativa	Cannabaceae	Fruit	
		Poondu	Allium sativum	Amaryllidaceae	Seeds	
Milagu	Piper nigrum	Piperaceae	Seeds			
Perungaiyam	Ferula asafoetida	Umbelliferaceae	Root	The ingredients are grinded and made into tablets.		

		Seeragam	Cuminum cuminum	Apiaceae	Seeds	They are smashed and made into a decoction and given internally.
		Vetpalai	Wrightia tinctoria	Apocynaceae	Tender leaves	
		Poondu	Allium sativum	Amaryllidaceae	Seeds	
		Milagu	Piper nigrum	Piperaceae	Seeds	
		Vettilai	Piper betel	Piperaceae	Leaves	
		Seeragam	Cuminum cuminum	Apiaceae	Seeds	
6	Fracture	Odivadakki	Justicia procumbens	Acanthaceae	Leaves	The ingredients were made into a paste, mixed with a Goat * Sheepmilk and applied over a guaze and wrapped around the affected area.
		Pirandai	Cissus quadrangularis	Vitaceae	Stem	
		Thagarai	Cassia tora	Fabaceae	Leaves	Leaves are grinded with egg white and applied in the guaze. It is wrapped around the affected area.
		Ulunthu	Vigna mungo	Fabaceae	Seeds	The ingredients were grinded with egg white and ghee and 250g is given internally.
		Thengai	Cocus nucifera	Arecaceae	fruit	
7	Contusion	Puli	Tamarindus indica	Fabaceae	Fruit	The ingredients were mixed with mud and made into a paste and heated in mud vessel. The paste has to be applied in a moderate heat.
		Kezhvaragu	Eleusine coracane	Poaceae	Seeds	
8	Ear ache	Kollu	Macrotyloma uniflorum	Fabaceae	Whole plant	The extract is given as ear drops.
9	Wound in knees	Kodikalli	Sarcoemma brevistigma	Apocynaceae	Milk	Milk is applied over the wound.
10	Abscess in thigh	-	-	-	-	Cauterization is done in the shape of coconut tree over the thigh.
11		Nel	Oryza sativa	Poaceae	Seeds	

	Liver disorders	Manjal	Curcuma longa	Zingiberaceae	Rhizome	The above ingredients are powdered and mixed with cow's urine and given internally.
		Kinatradipoondu	Tridax procumbens	Asteraceae	Rhizome	
12	Wounds	Sarakkondrai	Cassia fistula	Fabaceae	Leaves	The burnt Human hair, butter and powdered leaves are mixed together and applied over the wounds.
13	Immunomodulator	Poosani	Cucurbita maxima	Cucurbitaceae	Fruit	The ingredients were grinded and given single dose for 20 days.
		Paasipayiru	Vigna radiata	Fabaceae	Seeds	
		Paruthi	Gossypium herbaceum	Malvaceae	Seeds	
		Ellu	Sesamum indicum	Pedaliaceae	Seeds	
14	Galactagogue	Nilakadalai	Arachis hypogea	Fabaceae	Seeds	Any of the two herbs can be given to enhance galactagogue activity.
		Ulunthu	Vigna mungo	Fabaceae	Seeds	
		Paruthi	Gossypium herbaceum	Malvaceae	Seeds	
		Ellu	Sesamum indicum	Pedaliaceae	Seeds	
		Paasipayiru	Vigna radiata	Fabaceae	Seeds	
15	Laxative	Nuna	Morinda tinctoria	Rubiaceae	Leaves	One part of tender leaves has to be given internally.
16	Scabies	Chinni	Acalypha fruticosa	Euphorbiceae	Leaves	Leaves are made into a paste and applied over the skin lesions.
17	Fracture of Horns	Aal	Ficus benghalensis	Moraceae	Milk	(i) Milk of Aal is applied on the guaze and wrapped around the affected area (ii) Mud is made into a paste, applied on the guaze and wrapped over the affected area. (iii) Mud is grinded with egg white and applied on the

						guaze, wrapped over the affected area
18	Retained Placenta	Katrazhai	Aloe vera	Liliaceae	Leaves	(i)Pulp of Sotru katrazhai is washed and given a single dose internally. (ii) It is grinded with buttermilk and given internally.
19	Infertility	Kollu	Macrotyloma uniflorum	Fabaceae	Seeds	100g Sprouted kollu is given internally for six days.
		Horns	-	-	-	Horns of the infertile cow should be scrapped and mixed with 100ml milk and given internally.
20	For not feeding	Pirandai	Cissus quadrangularis	Vitaceae	Stem	Pirandai is made into a paste and applied over the fore udder and teat.
21	Diarrhoea	Vaagai	Albizia lebback	Fabaceae	Leaves	The ingredients are smashed and made into a decoction.
		Vanni	Prosopis spicigera	Fabaceae	Leaves	
		Puli	Tamarindus indica	Fabaceae	Fruit	
		Etti	Strychnus nux vomica	Loganiaceae	Leaves	
		Athi	Ficus racemosa	Moraceae	Fruit	
		Maa	Mangifera indica	Anacardiaceae	Leaves	
		Ilanthai	Ziziphus mauritiana	Rhamnaceae	Stem bark	The ingredients are smashed and made into a decoction.
		Vila	Limonia acidissima	Rutaceae	Stem bark	
		Koyya	Psidium gujava	Myrtaceae	Leaves	
		Sarakkondrai	Cassia fistula	Fabaceae	Stem bark	It is made into decoction and 100ml is given internally.
		Sirukattu kodi	Cocculus hirsutus	Menispermaceae	Root and leaves	The ingredients are grinded and given a single dose of karkam internally.
Koyya	Psidium gujava	Myrtaceae	Leaves			
22	Hematochezia	Perunkattukodi	Pachygone ovata	Menispermaceae	whole plant	It is grinded with palm

						jaggery and made into kuligai. 3 tablets were given internally
23	Running nose	Kuppaimeni	<i>Acalypha indica</i>	Euphorbiceae	Leaves	The extract of all ingredients are mixed together and given as nasal drops.
		Vasambu	<i>Acorus calomus</i>	Araceae	Rhizome	
		Poondu	<i>Allium sativum</i>	Amaryllidaceae	Fruit	
22	Gastric ulcers	Ilanthai	<i>Ziziphus mauritiana</i>	Rhamnaceae	Stem bark	The ingredients are smashed and made into a decoction.
		Vila	<i>Limonia acidissima</i>	Rutaceae	Stem bark	
		Koyya	<i>Psidium gujava</i>	Myrtaceae	Leaves	
23	Ear abscess	Thapisi	-	-	Stem Bark	Extract of bark of Thapisi tree is given as ear drops.
24	Indigestion	Milagu	<i>Piper nigrum</i>	Piperaceae	Seeds	The ingredients are grinded and mixed with warm water and given internally for 3 days.
		Vettilai	<i>Piper betel</i>	Piperaceae	Leaves	
25	Karanai (Foul smelling discharge from nose and mouth)	Puli	<i>Tamarindus indica</i>	Fabaceae	Fruit	The ingredients are grinded with gingely oil and made into paste. It is applied on the tongue.
26	Snake bite	Chinni	<i>Acalypha fruticosa</i>	Euphorbiceae	Leaves	One part of leaves is grinded and mixed with warm Water and given internally.
27	Loss of appetite	Marudhani	<i>Lawsonia inermis</i>	Lythraceae	Leaves	Leaves are grinded and made into a paste. It has to be given internally twice a day.
28	Dyspnea & Sneezing	-	-	-	Incision	(i)n In cows, if Swelling is in the nasal cavity - Incision should be done. Black colored bloody discharge is seen.

						(ii)In case of buffaloes, if swelling is underneath the tongue - Incision
29	Abortion	Ammanpacharasi	Euphorbia hirta	Euphorbiceae	Leaves	Leaves are grinded with milk and 100ml is given internally on the next day of coitus.
30	Bloating	Vetpalai	Wrightia tinctoria	Apocynaceae	Tender leaves	The hairs of cow's tail is burnt, added with the other ingredients and grinded and mixed with 100ml warm water and given internally.
		Poondu	Allium sativum	Amaryllidaceae	Bulb	
31	Cataract	Thaivelai	Cleome gynandra	Capparaceae	Leaves	(i)Extract is mixed with little amount of salt and given as eye drops. 2 drops can be given. (ii) Cauterization has to be done near eyes on both sides
32	Skink bites	Perungaiyam	Ferula asafoetida	Umbelliferaceae	Exudate of roots	It is grinded and 20g is mixed with water and given internally.
33	Scabies	Ellu	Sesamum indicum	Pedaliaceae	seeds	The ingredients are mixed with salt and buffalo's ghee is made into paste and applied externally. Dried grass must be given as a "Pathiyam"
		Elumichai	Citrus limon	Rutaceae	Fruit	
34	For weight gain	Vilvam	Aegle marmelos	Rutaceae	Fruit	Pulp is grinded and mixed with butter milk and given internally.

35	Rheum of the eyes	Azhinjil	Alangium salvifolium	Cornaceae	Roots	Roots are grinded and mixed with buttermilk and given internally.
36	Loss of Appetite	Naarathai	Citrus medica	Rutaceae	Fruit	The ingredients are grinded with salt and applied on the tongue.
		Chukku	Zingiber officinale	Zingiberaceae	Rhizome	
37	Cracks in teat	Butter	-	-	-	Application of butter regularly till it heals.
38	Indigestion	Manjal	Curcuma longa	Zingiberaceae	Rhizome	The ingredients are grinded into a paste and given internally.
		Seeragam	Cuminum cyminum	Apiaceae	Seeds	
		Kothamalli	Coriandrum sativum	Apiaceae	Seeds	
39	Wounds due to chicken pox	Kuppaimeni	Acalypha indica	Euphorbiaceae	Leaves	The ingredients are mixed with gingely oil, boiled and applied over the ulcer for 15 days
		Poondu	Allium sativum	Amaryllidaceae	Bulb	
		Vembu	Azadirachta indica	Meliaceae	Leaves	
		Thulasi	Ocimum sanctum	Lamiaceae	Leaves	
		Marudhani	Lawsoniainermis	Lythraceae	Leaves	
		Manjal	Curcuma longa	Zingiberaceae	Rhizome	
40	Contusion	Karuvel	Acacia nilotica	Fabaceae	Stem bark	The ingredients are grinded into paste and applied externally
		Kezhvaragu	Eleusine coracane	Poaceae	Seeds	

CONCLUSION

The study revealed that Denkanikottai has a diverse range of medicinal plants used for alleviating the cattle diseases. Despite the global modernization, the traditional practitioners preserved the knowledge of the plants and Siddha formulations till now. This documentation of traditional practice in Denkanikottai brought a light to the unexplored wing so called Veterinary science in Siddha system of medicine.

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