

**PRESENT STATUS OF TRADITIONAL HEALING WITH ANIMALS
AND ANIMAL PRODUCTS IN INDIGENOUS MEDICINE –
A LITERATURE REVIEW**

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ABSTRACT

Indigenous medicine, the foundation of the age-old practice of medicine in the world, has played an essential role in human health care services from its inception. Since time immemorial extensive use of animals has been made in traditional medicine. The objective of the study is to find out the number of animals from the Kingdom Animalia and their uses in Traditional Medicine which are mentioned in the Indigenous Medicine texts. In appropriately these Literatures were analyzed on the topic. Approximately 128 animals were found under the classification of Kingdom Animalia .Out of 8 main Phylum, 6 were

most probably used by Indigenous practitioners. They are as, Phylum *Porifera*(0.78%), *Cnidaria*(0.78%), *Annelida*(2.34%), *Mollusca*(6.25%), *Chordata*(77.34%), and *Arthropoda*(10.93%). Among these Phylum, *Chordata* acquires highest values in utilization especially the *Class Mammalia*. Different animals or animal parts used in medicaments and they contain certain chemical constituents. Yet they implicated in medicinal purposes, even by the modern medical sciences. They have various actions on the human body systems acting most on the digestive system especially with Demulcent action. They act on other systems too. In this century the traditional knowledge is fast eroding due to modernization. So, the bottom line of the study is that there is an urgent need to make such study in the field of zoology and conducting further researches in appropriately will render a great base for animal sciences in the field of Indigenous Medicine.

KEYWORDS: Animals, Indigenous Medicine, Medicinal Preparations, Therapeutics.

1. INTRODUCTION

Indigenous medicine, the foundation of age-old practice of medicine in the world, has played an essential role in human health care service and welfare from its inception. Apart from herbs and minerals they also used animal products as medicine, for example in mental diseases, *peranda bhasma* is used and it is a powder made of human skull bones and the skulls of dogs. So The healing of human ailments by using therapeutics that are obtained from animals or ultimately are derived from them is known as zootherapy.^[7]

A lot of efforts has gone into documentation, use, identification and validation of plant based traditional medicines but studies on most of the animal based medicines are sporadic, despite the fact that traditionally many animal based drugs are administered all over the world. Animal-based medicines have been elaborated from parts of the animal body, from products of its metabolism (corporal secretions and excrements), or from non-animal materials (nests and cocoons).^{[7],[1]}

These are used either singly or in compound formulations and prepared in a variety of forms i.e.: powder, ash, decoctions, syrup, ointments, liniments, etc.^{[7],[1]}

Indeed, animals are therapeutic arsenals that have been playing significant roles in the healing processes, magic rituals, and religious practices of peoples from many parts of the world.^[7]

1.1. Justification of Study

Since times immemorial, we can find that people still use various animal products and by-products for the cure of various diseases. For example, honey is used as expectorant, cattle urine and milk has been used as a therapeutic.^[1] The studies on the therapeutic uses of animals and their parts have been neglected, when compare to plants. Thus there is an urgent need to make such study in the field of Zootherapy and conducting further researches on appropriately will render a great base for animal sciences in the field of Indigenous medicines, so that it can be put to the welfare of human kind.

2. OBJECTIVES

2.1. General Objective

- To find out the number of animals from the animal kingdom and their uses in various aspects of therapeutics which are mentioned in the Indigenous Medicine texts.

2.2. Specific Objectives

- To identify the number of animals in total amount and classifying them according to characters regarding biodiversity
- To identify the parts used in medicinal ailments and specifying as live or non live
- To identify the chemical constituents of Animal Parts
- To identify products from animal parts.
- To identify the use of animal origins in the systems of human body and the dominating actions in each systems.

3. METHODOLOGY

In appropriately the Literatures as Indigenous medicine texts (as Indian Materia Medica vol-II), and for further *Gunapadam Thathujeeva Vaguppu* were analyzed on the use of Animal Kingdom^[VI] and their therapeutic values. These texts were obtained from The Library, Unit of Siddha Medicine, University of Jaffna and Reference, Historical Section of Public Library, Jaffna to complete the study.

According to the collected data, the total number of animals classified taxonomically, type of animal/animal parts used for medicinal purposes, the form of usage, list of chemical constituents, use of products in medical ailments, effect of animals on human body systems and actions used most in each system.

4. RESULTS AND DISCUSSION

Table 1: Total number of animals and their taxonomical classifications.

Animal Kingdoms		Numbers	Total Number
1.	Phylum Poriphera	1	1
2.	Phylum Coelenterata		1
	1.Class Anthozoa	1	
3.	Phylum Annelida		3
	1.Class Oligochaeta	1	
	2.Class Hirudinae	2	
4.	Phylum Mollusca		8
	1.Class Gastropoda	4	
	2.Class Bivalvia	3	
	3.Class Cephalopoda	1	
5.	Phylum Chordata		99
	1.Class Chondrichthyes	2	
	2.Class Osteichthyes	23	
	3.Class Amphibia	2	
	4.Class Retilia	12	

	5.Class Aves	27	
	6.Class Mammalia	33	
6.	Phylum Arthropoda		16
	1.Class Crustaceae	2	
	2.Class Insecta		
	1.Order Hymenoptera	6	
	2.Order Hemiptera	2	
	3.Order Lepidoptera	1	
	4.Order Coleoptera	5	
	Total Numbers	128	128

Approximately 128 animals were found according to the data collected. Their classification under Kingdom Animalia is shown in TABLE.1. Out of 8 main phylums of the Kingdom Animalia 6 were most probably used by the folks and Indigenous practitioners. They are as, Phylums Porifera, Coelenterata, Annelida, Mollusca, Chordata and Arthropoda. Among these phylum, Chordata acquires highest values in utilizations specially the Class Mammalia. Even the Phylum Porifera is a oldest classification of Animalia and low kind of variety it is also used in the medicinal preparations.

Type of animal / animal parts used is categorized in TABLE.2. According to the information provided in the literatures greater amount used animal or animal parts are raw materials. The next considered is fresh parts including the flesh of animals vastly. Only one alive used medicinal animal is *Hirudo Medicinalis* (medicinal leeches) CHART.2.

Table 2: Type of animal/animal parts used for medicinal purposes.

Parts Used	Numbers
Flesh	39
Insects	13
Feathers, Bones, Bile, Urine	10
Hoofs	9
Horns	8
Lactus, Teeth	7
Egg Shell, Shells	6
Oil	5
Dung, Lard/Fat, Excretions, Venom	4
Cera	3
Excreta, Egg	2
Musk, Nest, Shellac, Mel, Slough, Blood, Worm, Ising Glass, Ash, Pearl, Skeleton Lump- Porous	1

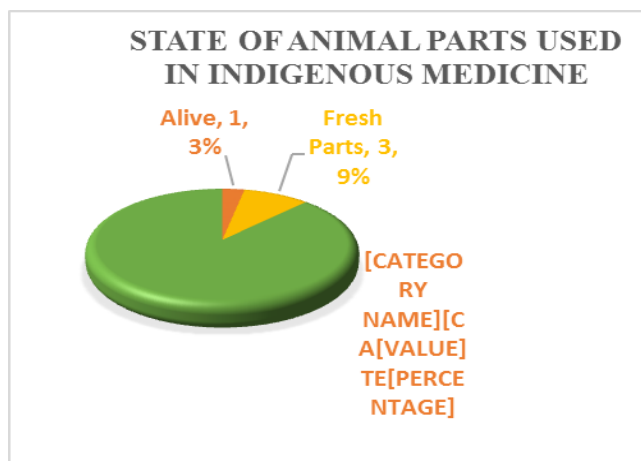


Chart 1: State of Animal parts used in Indigenous Medicine.

Table 3: Chemical constituents found in Animal origins.

Chemical Constituents from secretions and lard	Chemical Constituents from hard particles (Shells)	Present Numbers
Ambrein, Balsamic Acid, Bromine Crystal, Castorin, Carmin, Carminic Acid, Coccarine, Codliver, Extractive Matter, Liquid Fat /Fatty Acid, Myricin Myretin, Oleic Acid, Palmitin, Salt Sulphur, Valerianic Acid, Levulose Formic Acid, Proteiods, Stearic Acid Iodine	Calcium Phosphate, Animal Organic Matter, Carbonate of Lime, Magnesium Carbonate Phosphate, Fluoride, Magnesium Phosphate, Manganese, Sodium Cluoride, Calcium, Magnesium Alum, Carbonate, Oxide of Lime	1
Albumen, Ammonia, Cholesterine Gelatin, Margarine, Olein, Stearin Wax	Oxide of Iron, Phosphate, Sulphate Silica	2
Fat -3, Volatile Oil, Resin	Calcium Carbonate	3
Ash		4

Different chemical constituents present in the Animal parts were categorized into two as whether they present in secretions like fat/lard, castorenm, wax or solid materials including hard particles like shells, horns etc. Each chemical constituents present no of animal given in the first column (i.e. Ambrein-1, Calcium Carbonate -3).

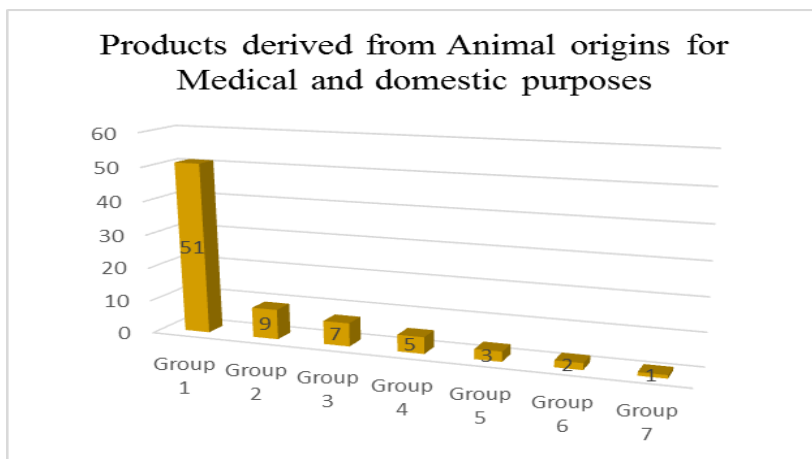


Chart. 3: Products derived from Animal origins for Medical and domestic purposes.

Group 1	Medicated Powders
Group 2	Medicated Oils
Group 3	Ointment
Group 4	Pills Plaster
Group 5	Perfumes Cosmetic
Group 6	Tooth Powder
Group 7	Suppositories, Pessaries Lozengers, Vaccine, Soap Soaking Powder, Pastes Hair Lotion /Hair Oil, Liniment Oriental / Incense

As per to the literatures, products derived for medicinal use are shown in CHART.3. According to that, the high value shows for medicated powders like choorna, pashma etc and the next mostly used for medicated oils. Others ointments, pills, plaster, suppositories etc in less amounts.

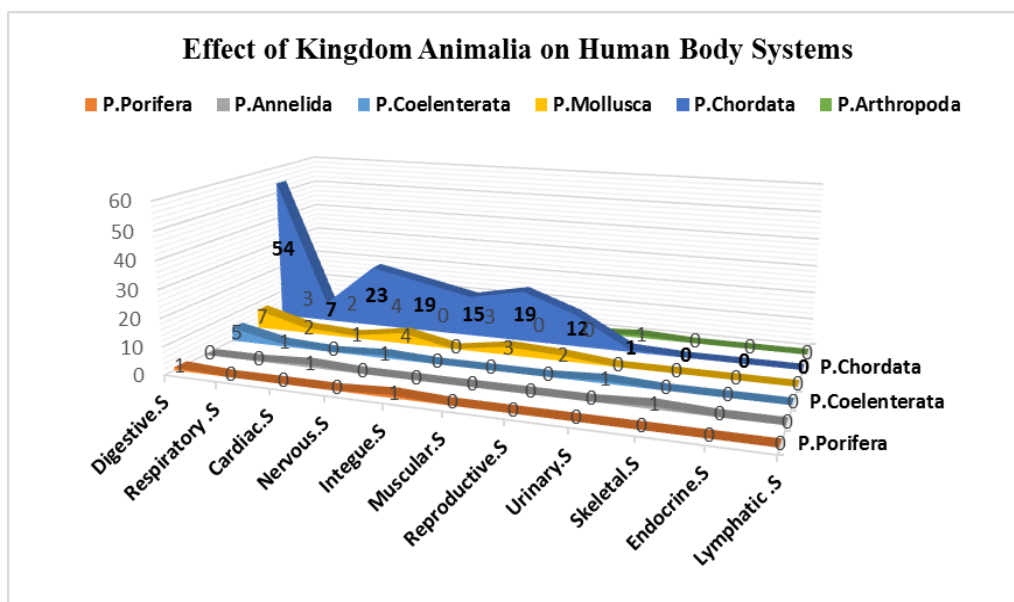


Chart 4.

Animal derivatives in indigenous medicine have effects on human body systems. Among that no animal are tend to present in lymphatic and endocrine systems for medical purpose. The maximum amount of animals used in decreasing order are digestive, cardiac, nervous, integumentary etc. Even in digestive system Phylum chordata shows the high values in medicinal uses.

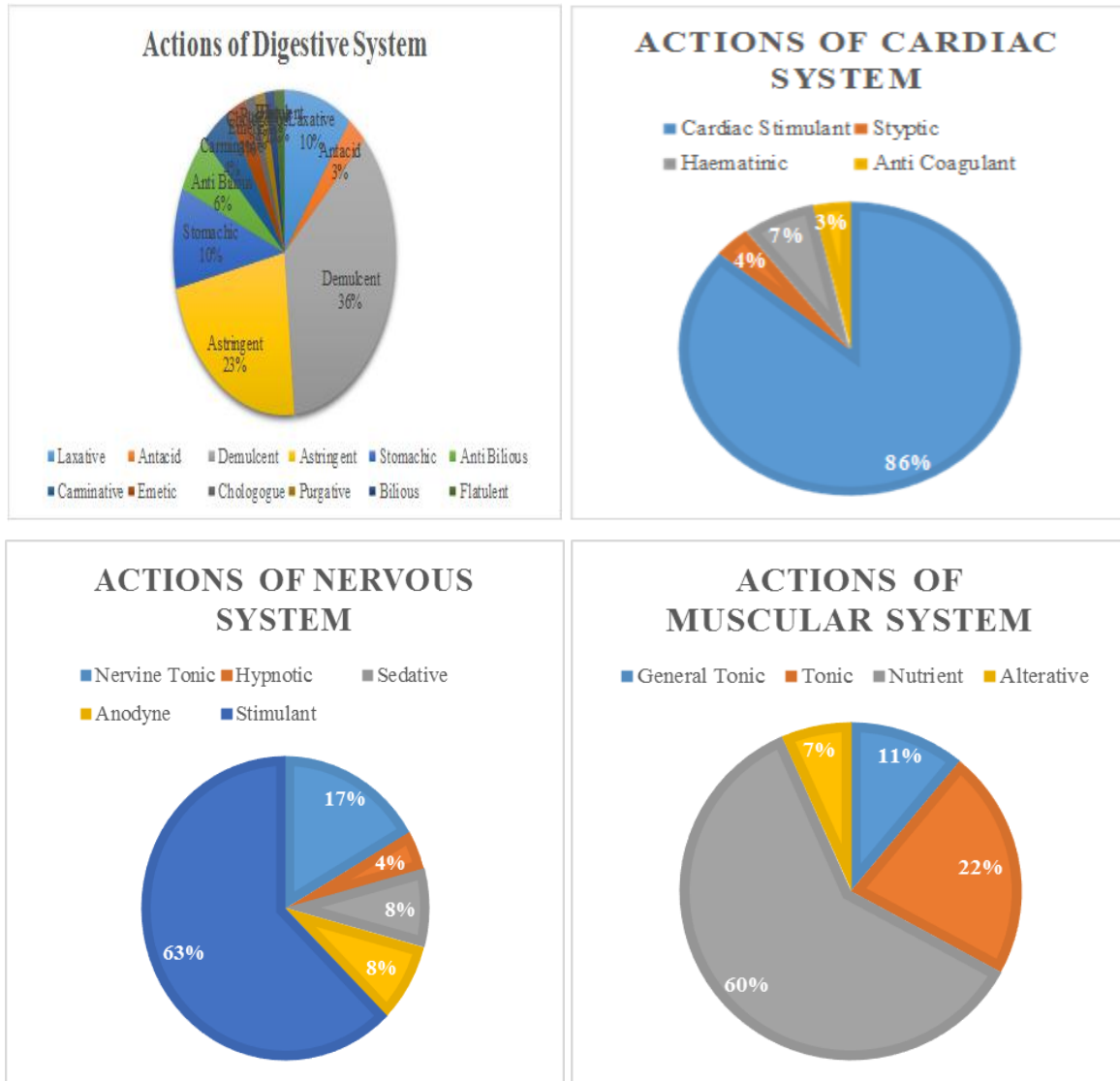


Chart 5: Highest percentage of Actions on each systems of the human body.

Animal organs mostly used systems were selected and studied under actions on each. According to that in digestive system – demulcent, Cardiac system- Cardiac stimulant, Nervous system – Nervine tonic, Muscular system- Nutrient are the actions have most impact on each systems.

5. DISCUSSION

It is widely accepted that plants, animals and their by-products used as a source of folk or traditional medicines indicate the presence of a biologically active constituents in them.^[1] Although today much is known about the phytochemistry and phytopharmacology of many traditional plant remedies, but real bio-scientific evaluations of remedies of animal origin are still quite rare in the literature. However many animals have been methodically tested by pharmaceutical companies as sources of drugs to the modern medical science.

Despite their importance, studies on the therapeutic uses of animals and their body parts have been neglected, when compared to plants. Scholarly investigation of studies on medicinal uses of animals and their products, as well as of inorganic materials, should not be neglected and should be considered as an important complementary body of knowledge.

6. CONCLUSION

According to the study 128 animals were stated to be used in traditional medicine systems. Animals cover nearly 15-20 percent of Ayurvedic Pharmacopoeia. Among the taxonomical classification made, the use of chordates specially mammals have a great place in medicinals ailments.^[6]

Different parts of this animals or animals alone utilized treating patients such as hoofs, horns, shells, secretions etc. In relevantly these parts of animals contain certain chemical constituents. Yet they have some specification in preparing medicinal instruments and materials even by the modern medical sciences starting from medicated oils to ointments, suppositories, lozengers etc. these Medicaments have various actions on the human body systems. Relevant to the data, most animals frequently used in digestive system with the action of demulcent and the next prioritized one is cardiac system with action of cardiac stimulant.

The understanding and usage of animal derived substances has been very comprehensive. This tradition has been quite dynamic and unbroken till recently. Many of these practices are slowly vanishing from living traditions due to lack of proper documentation, identification, availability etc. Therefore research of this subject is necessary to revive this traditional use of animal kingdom and traditional medicinal system that have plenty of information on fauna.

7. SUGGESTIONS

The use of animals for medicinal purposes is not simply a matter of the pharmaceutical and medical sciences; joint-research programmes should be undertaken with experts in the fields of ecology, linguistics, sociology, anthropology, etc. Thus, discussing Zootherapy within the multidimensionality of sustainable development turns out to be one the key elements in achieving the sustenance of medicinal faunistic resources.

The use of animals for medicinal purposes is a body of traditional knowledge which is increasingly becoming more relevant to discuss on conservation biology, public health policies, sustainable management of natural resources, biological prospection, and patents.

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