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“Management of Snake Bites in Siddha Medical System”

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Abstract

Siddha medicine is most effective ancient Indian Medicine. It deals toxicological aspect of management to all poisonous bites especially snake bites. In siddha medical text book referred the “Siddha Toxicology” reveals management for snake bites. In this research to explore the world that ancient siddha management for snake bites such as 64 types of snakes and its management for bites. This research results were recorded as; 106 plant raw materials, 15 minerals and 14 animal products recorded for snake bite management. In plant raw material most common plants are occupied Fabaceae(14), Euphorbiaceae(6), and other 52 families. And *Acoruscalamus* repeated 12 times, *Allium sativum* used 11 times, *Piper nigrum* used 09 times which plants are most used for management of snake bites among 106 plants. 06 types of external medicines and 05 types of internal medicines were list for management on Snake bites. In external medicines, fomentation and poultices are most commonly prescribed and internally Fresh Juice (*Chaaruvu*) and Hard Paste (*Karkam*) were most commonly used for snake bite managements. And especially route of medicine administration was nasal, eye drop and other part of the body than the oral route. Finally concluded as siddha medical system dealing with management of snake bites with plants, minerals and animal products in ancient time which management protocols should be established with proper scientific evidence based in future for man-kind purpose to world.

Keywords: snake bites, siddha management, Siddha Toxicology.

Introduction



There are more than 3500 species of snakes, but only about 250 are venomous. In India about 216 species are found, of which 52 are poisonous. According to WHO, there are more than 2.5 million venomous snake bites worldwide each year with more than 125000 deaths. **In India only five of them are dangerously poisonous to man, i.e. king cobra, common krait, Russell's viper and saw – scaled viper.** The most common poisonous snake is common krait. The poisonous snake may be divided into 5 families (1) (A) Viperidae (B) Crotalidae (2) Elapidae (3) Hydrophidae or sea snakes (4) colubridae (5) Atractaspididae. The common poisonous snake are the cobra, the king cobra, the common krait, the banded krait, russell's viper or daboia, the saw – scalled viper, pit vipers.

Snake venom: Venom is the saliva of the snake (The salivary glands of the snake and are situated behind the eyes, one on each side of the head above the upper jaw). Cobra venom is faint transparent yellow and is slightly viscous. Russell's viper venom is white or yellow. The colubrine and elapidae venom is mainly neurotoxic, and has a primary toxicity for the respiratory and cardiac centers. The viperine venom is mainly haemolytic and causes intravascular haemolysis and depression of the coagulation mechanism. The most common symptoms are following snake bite (poisonous or non – poisonous) s fright, especially the fear of rapid and unpleasant death. Sometimes, it produces psychological shock and even death. The fatal dose of Cobra are 12mg; Russell's viper 15mg; Echis 8mg; Krait 6mg; of dried venom. The approximate yield in one bite in terms of dry weight of lyophilized venom is: Cobra 170 to 325 mg; Russell's viper 130 to 250 mg; krait 20 mg; and echis 20 to 35 mg. The fatal period is cobra are half to six hours; viper one to two days. The polyvalent antsnake venom (PAV) s prepared by hyper-immunizing horses against the venom of the four common poisonous snakes, i.e., cobra, common krait, Russell's viper and saw scaled viper. In siddha system, there are 64 types of poisonous snakes are described in authentic text books, and there managements are prescribed perfectly.

Aim

Enumerate the number of ingredients used in management for snake bite in ancient siddha Medical System.

Objective

- To list out the number of plants which are used for management of snake bite in Siddha Medicine.
- To list out the number of metals & minerals which are used for management of snake bite in Siddha Medicine.
- To list out the number of animal products which are used for management of snake bite in Siddha Medicine.

Materials and Methods

Research type – Literature Review

Data collected from – “Siddha Toxicology”, - a translation of Tamil siddha text NanjuMurivuNool written by Vaidya SironmaniPandit Dr. K. S. Murugesu Muthalitar, Revised by Dr. Pon Gurusironmani, Translated by P. Jeyaraj and Edited by: Dr. Anaivaari R. Anandan, published by: Department of Indian Medicine & Homeopathy, Chennai 600 106, 1st edition-1999, reprinted Year – 2017.

This book compendium of following this book,

Theraiyaryemakavenba, Theraiyargunapadam, Theraiyarkarisal 300, Theraiyarthailavarukasurukkam, Theraiyarsekarappa, Agasthiyarvidapirathividathirattu, Agasthiyarvaithiyakaviyam 1500, Bohar 3000, Karuvoorthevar – thandagam, Theraiyarkarisal, Agasthiyarpatharthagunasindhamani, Agasthiyar 21000, Vidasangaraaarudam, Nagaarudam, Sarppaarudam, Karudaarudam, Pullipani 500, Vagadasanthrothayam, Aayulvasittam, Thiruvalluvar Thirukural.

Analysis

- Data analysis by MS excel.
- Descriptive simple Statistical way.

Results

	Plants	Botanical name	Famly	Taxonomay	Parts used
1	Kodikkalli	<i>Sarcosemma brevistigma</i>	Euphorbiaceae	Cactus	Tender Leaves
2	Seenthil	<i>Tinospora cordifolia</i>	Menspermeaceae	Climber	Tender Leaves
3	Mudakkatran	<i>Cardiospermum helibacum</i>	Sapindaceae	Climber	Tender Leaves
4	karisallankanni	<i>Eclipta prostrata</i>	Asteraceae	Herb	Whole Plant
5	Thiruneettrupatchai	<i>Ocimum basilcum</i>	Lamiaceae	Herb	Whole Plant
6	Vasambu	<i>Acorus calamus</i>	Acoraceae	Herb	Root
7	Vellaipoondu	<i>Allium sativum</i>	Amaryllidaceae	Herb	Rhizome
8	Perumarappattai	<i>Ailanthus excelsa</i>	Simarouvaceae	Tree	Bark
9	Peenari	<i>Sterculia foetida</i>	Malvaceae	Tree	Whole Plant
10	Kaddamanakku	<i>Jatropha curcas</i>	Euphorbiaceae	Shrub	Tender Leaves
11	Milaku	<i>Piper nigrum</i>	Piperaceae	Climber	Seeds
12	Thippili	<i>Piper longum</i>	Piperaceae	Climber	Unripe fruit
13	Chukku	<i>Zingiber officinale</i>	Zingiberaceae	Herb	Rhizome
14	Kaduku	<i>Brassica juncea</i>	Brassicaceae	Herb	Dry fruit
15	Saranai	<i>Trianthema portulacastrum</i>	Aizoaceae	Herb	Root
16	Vetrillai	<i>Pipper bettle</i>	Piperaceae	Climber	Leaves
17	Mavillai	<i>Mangifera indica</i>	Anacardaceae	Tree	Tender Leaves
18	Nottchi	<i>Vitex negundo</i>	Lamiaceae	Shrub	Tender Leaves
19	Tulasi	<i>Ocimum sanctum</i>	Lamiaceae	Herb	Leaves
20	Thumbai	<i>Leucas aspera</i>	Lamiaceae	Herb	Leaves
21	Velai	<i>Cleome gynandra</i>	Cleomaceae	Herb	Whole Plant
22	Perunkayam	<i>Ferula asafoetida</i>	Apiaceae	Shrub	Resin
23	Theatran	<i>Strychnos potatorum</i>	Loganiaceae	Tree	Whole Plant
24	Etti	<i>Strychnosnux vomica</i>	Loganiaceae	Tree	Whole Plant
25	Marukkarai	<i>Catunaregumspinosa</i>	Rubiaceae	Shrub	Whole Plant
26	Mallikai	<i>Jasminumgrandiflorum</i>	Oleaceae	Climber	Whole Plant
27	Nervalam	<i>Croton tiglium</i>	Euphorbiaceae	Shrub	Seeds
28	Valai	<i>Musa paradisiaca</i>	Musaceae	Tree	Stem
29	Iluppai	<i>Madhuca longifolia</i>	Sapotaceae	Tree	Fruit
30	Erukku	<i>Calotrophis gigantea</i>	Asclepiadaceae	Shrub	Root
31	Alinchil	<i>Alangium salvifolium</i>	Alangiaceae	Tree	Seeds
32	Vila	<i>Limonia acidissima</i>	Rutaceae	Tree	Whole Plant
33	Avuri	<i>Indigofera tinctoria</i>	Fabaceae	Herb	Seeds
34	Senkathari	<i>Capparis sebiaria</i>	Capparaceae	Shrub	Root
35	Vagai	<i>Albizia lebeck</i>	Fabaceae	Tree	Root
36	Katralai	<i>Aloe barbendensis</i>	Asphodelaceae	Cactus	Root
37	Nalvelai	<i>Cleome viscosa</i>	Cleomaceae	Herb	Root
38	Kuppaimeni	<i>Acalypha indica</i>	Euphorbiaceae	Herb	Root
39	Murungai	<i>Moringa olefera</i>	Moringaceae	Shrub	Root
40	Ummathai	<i>Datura metel</i>	Solanaceae	Shrub	Root

41	Uththamani	<i>Pergularia daemia</i>	Asclepiadaceae	Climber	Root
42	Vattathuthi	<i>Abutilon indicum</i>	Malvaceae	Shrub	Whole Plant
43	Narunthalli	<i>Hypomia margineta</i>	Convulvulaceae	Climber	Leaves
44	Palasu	<i>Butea monosperma</i>	Fabaceae	Tree	Seeds
45	Milakai	<i>Capsicum annum</i>	Solanaceae	Herb	Unripe fruit
46	Puli	<i>Tamarindus indicus</i>	Fabaceae	Tree	Whole Plant
47	Aaduthinnapalai	<i>Aristolochia bracteolata</i>	Aristolochiaceae	Herb	Whole Plant
48	Sathurakalli	<i>Euphorpia antiquorum</i>	Euphorbiaceae	Cactus	Latex
49	Elumitchai	<i>Citrus lemon</i>	Rutaceae	Shrub	Whole Plant
50	Kovai	<i>Coccina grandis</i>	Cucurbitaceae	Climber	Leaves
51	Ellu	<i>Sesamum indicum</i>	Pedaliaceae	Herb	Whole Plant
52	Sankan	<i>Azima tetracantha</i>	Salvadoraceae	Shrub	Root bark
53	Chitramutti	<i>Pavonia zeylanica</i>	Malvaceae	Herb	Leaves
54	Thavasumurungai	<i>Rungia parviflora</i>	Acanthaceae	Herb	Leaves
55	Pungu	<i>Pongamia pinnata</i>	Fabaceae	Tree	Root
56	Paagal	<i>Momordica charantia</i>	Cucurbitaceae	Climber	Whole Plant
57	Sirukurinjan	<i>Gymnema sylvestre</i>	Apocyanaceae	Climber	Root
58	Mullai	<i>Jasminum multiflorum</i>	Oleaceae	Climber	Leaves
59	Vembu	<i>Azadiracta indica</i>	Meliaceae	Tree	Whole Plant
60	Pirandai	<i>Cissus quadrangularis</i>	Vitaceae	Cactus	Stem
61	Thali	<i>Hypomia alba</i>	convulvulaceae	Climber	Flower
62	Thakkali	<i>Physalis minima</i>	Solanaceae	Herb	Leaves
63	Nayuruvi	<i>Achyranthes aspera</i>	Amaranthaceae	Herb	Leaves
64	Pulladi	<i>Desmodium gangeticum</i>	Fabaceae	Creeper	Leaves
65	Sinni	<i>Acalypha fruticosa</i>	Euphorbiaceae	Shrub	Leaves
66	Kakkanam	<i>Clitoria ternatea</i>	Fabaceae	Climber	Root bark
67	Nilapanakkilanku	<i>Curculigo orchoides</i>	Hypoxidaceae	Climber	Tuber
68	Karipalai	<i>Tylophora indica</i>	Apocyanaceae	Climber	Root
69	Aathandai	<i>Capparis zeylanica</i>	Capparaceae	Climber	Root bark
70	Aakasakarudan	<i>Corallocarpus epgiaeus</i>	Cucurbitaceae	Climber	Rhizome
71	Thandri	<i>Terminalia bellarica</i>	Combretaceae	Tree	Seeds
72	Punnai	<i>Calophyllum inophyllum</i>	Calophyllaceae	Tree	Root
73	Kazhartchi	<i>Caesalpinia bonducella</i>	Fabaceae	Shrub	Seeds
74	Kadukkai	<i>Terminalia chebula</i>	Combretaceae	Tree	dry pulp
75	Makizh	<i>Mimusops elengi</i>	Sapodaceae	Tree	Bark
76	Karpogaarisi	<i>Psoralea corylifolia</i>	Fabaceae	Herb	Seeds
77	Thaluthalai	<i>Clerodendrum phlomoidis</i>	Lamiaceae	Shrub	Leaves
78	Panai	<i>Borassus flabellifer</i>	Arecaceae	Tree	Root
79	Parattai	<i>Ipomea reniformis</i>	Convulvulaceae	Climber	Leaves
80	Aaththi	<i>Bauhinia bariegata</i>	Fabaceae	Tree	Leaves
81	Kaelvaraku	<i>Eleusine coracana</i>	Poaceae	Herb	Seeds
82	Sirukeerai	<i>Amaranthus tricolor</i>	Amaranthaceae	Herb	Root
83	Ponnankkanni	<i>Alteranthera sessilis</i>	Amaranthaceae	Creeper	Root

84	Athimathuram	<i>Glycyrrhiza glabra</i>	Fabaceae	Herb	Root
85	Piray	<i>Streblus asper</i>	Moraceae	Tree	Latex
86	Paruthi	<i>Gossypium herbacum</i>	Malvaceae	Shrub	Leaves
87	Neermulli	<i>Hygrophila auriculata</i>	Acanthaceae	Herb	Leaves
88	Thennai	<i>Coccus nucifera</i>	Arecaceae	Tree	Tree
89	Vel	<i>Acacia nilotica</i>	Fabaceae	Tree	Bark
90	Karunai	<i>Amorphophallus paeonifolius</i>	Araceae	Herb	Stem
91	Karanthai	<i>Ocimum basilicum</i>	Lamiaceae	Herb	Whole Plant
92	Vezhi	<i>Cadaba fruticosa</i>	Capparaceae	Climber	Leaves
93	Kundri	<i>Abrus precatorius</i>	Fabaceae	Climber	Root
94	Aanainerunjl	<i>Tribulus terrestris</i>	Zycophyllaceae	Herb	Leaves
95	Thuthuvalai	<i>Solanum trilobatum</i>	Solanaceae	Climber	Root
96	Vizhuthi	<i>Cadaba trifoliata</i>	Capparaceae	Climber	Root
97	Kunkumapoo	<i>Crocus sativus</i>	Iridaceae	Herb	Stima
98	Mookirattai	<i>Boerhaavia diffusa</i>	Nyctaginaceae	Herb	Root
99	Nilakadambu	<i>Elytraria acaulis</i>	Acanthaceae	Herb	Whole Plant
100	Nannari	<i>Hemidesmus indicus</i>	Apocynaceae	Climber	Root
101	Ponmusuttai	<i>Cissampelos bareira</i>	menspermaceae	Climber	Root
102	Vidathari	<i>Dichrostachys cineria</i>	Fabaceae	Shrub	Bark
103	Peipalai	<i>Tylophora asthmatica</i>	Asclepidaceae	Climber	Root
104	Peithumati	<i>Citrullus colocynthis</i>	Cucurbitaceae	Creeper	Root
105	Kodiveli	<i>Plumbago indica</i>	Plumbaginaceae	Shrub	Root
106	Seruppadi	<i>Mollugo lotoides</i>	Molluginaceae	Creeper	Root

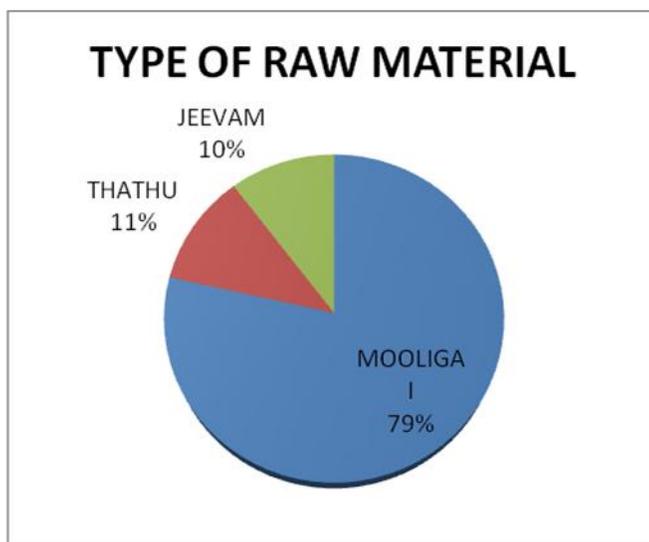


Fig: 1-Type of raw material

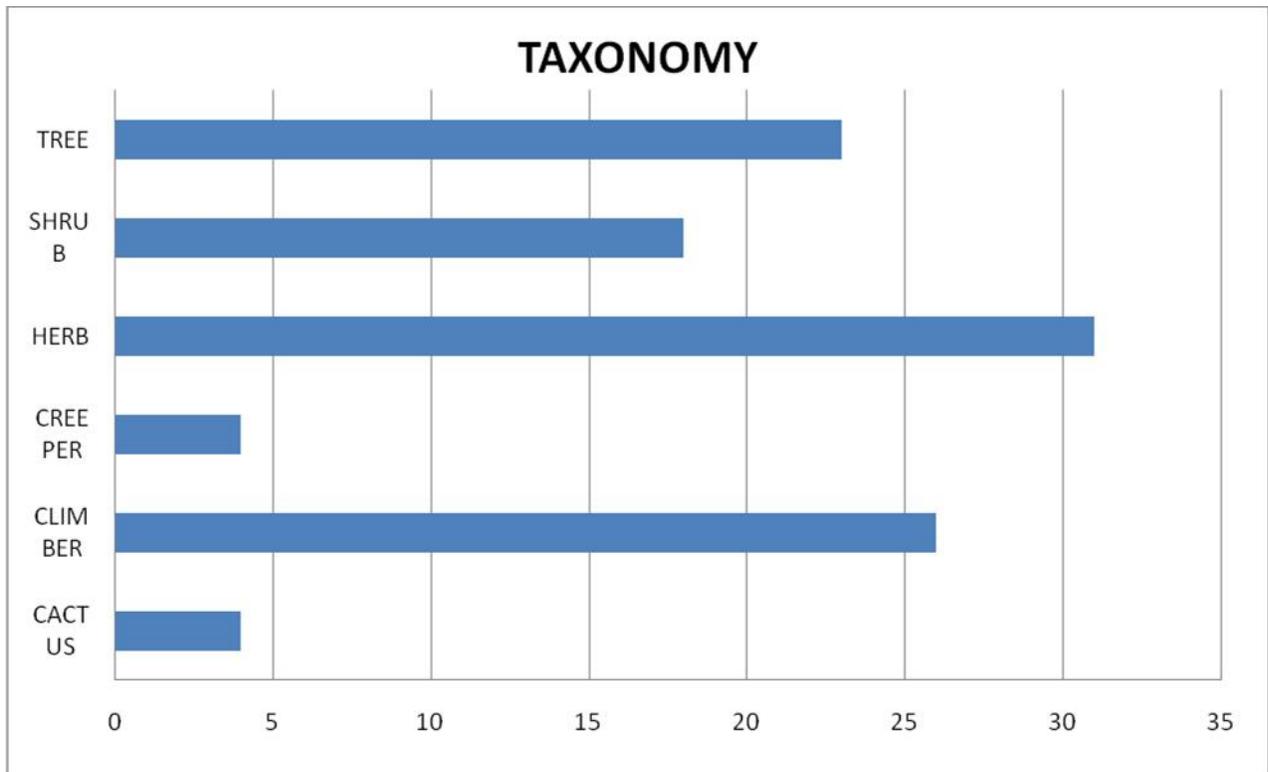


Fig: 2-Taxonomy of the plants

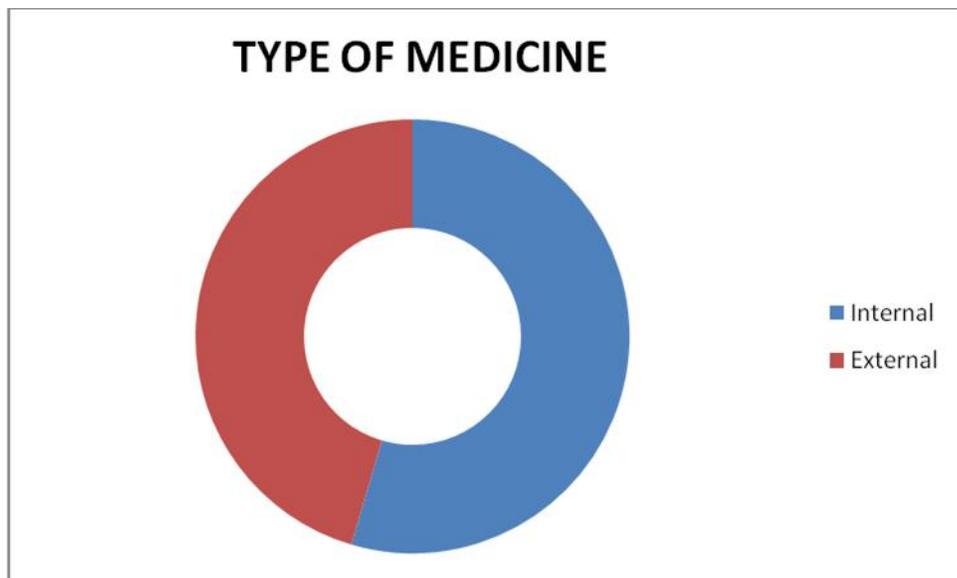


Fig: 3-Type of medicine

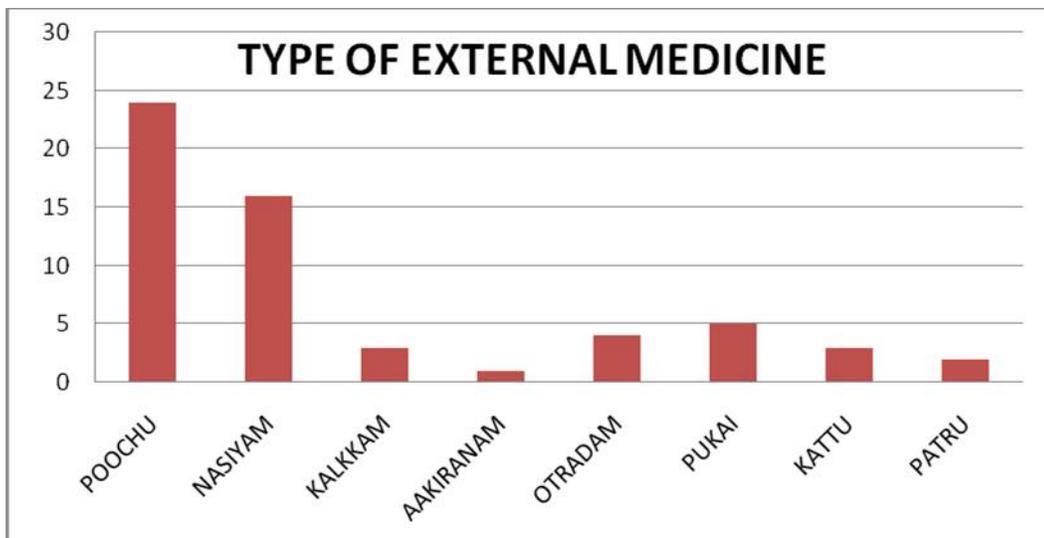


Fig: 4-Type of External Medicines

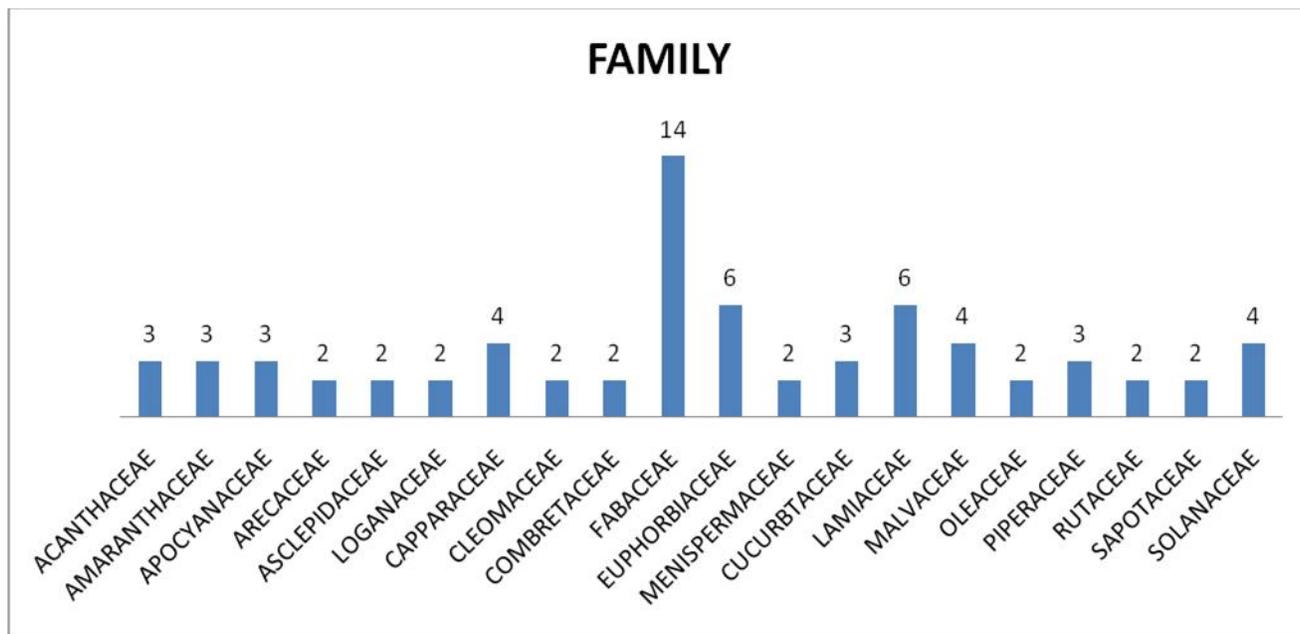


Fig: 5- Family of used plants

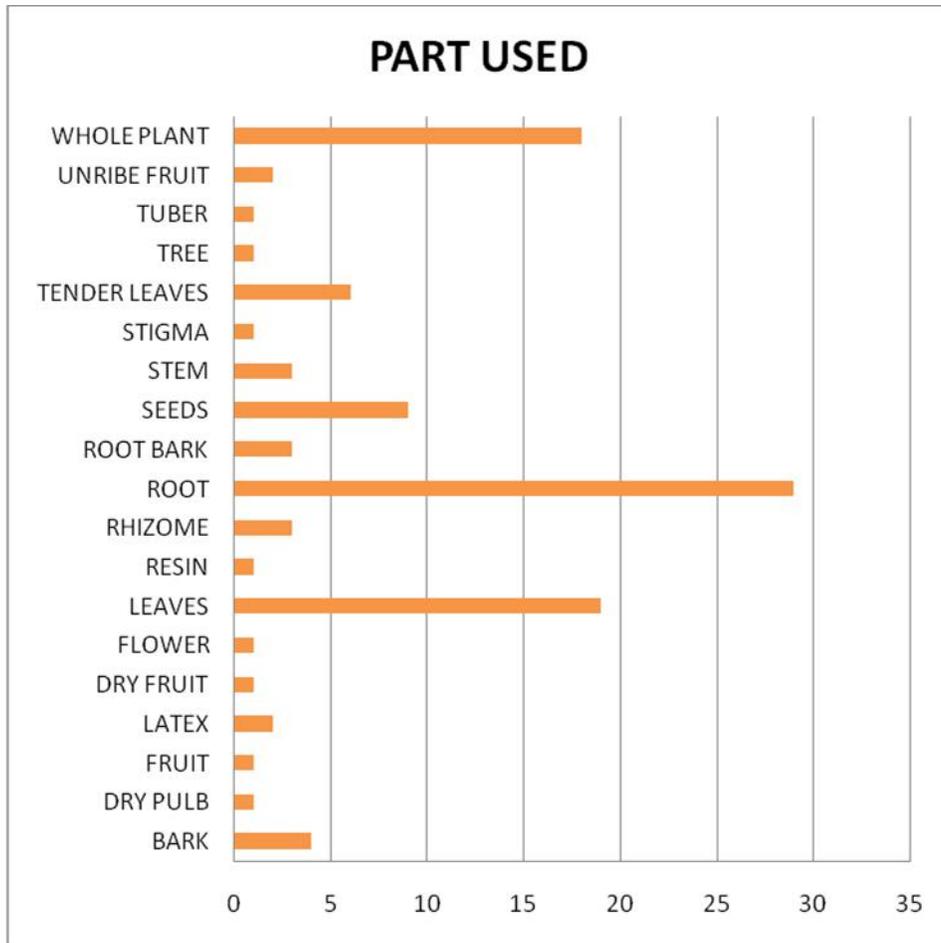


Fig: 6 - Part used for management

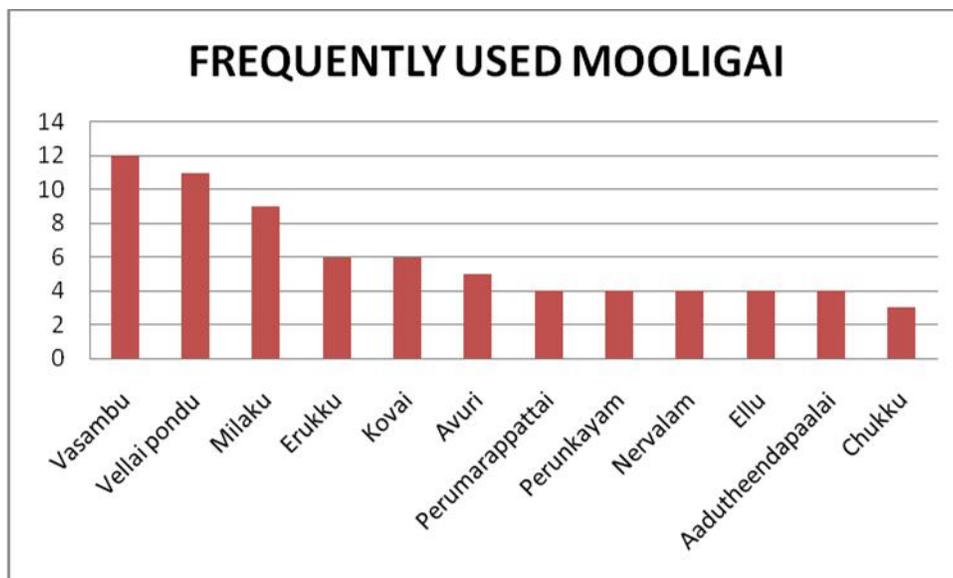


Fig: 7- Frequency of the used plants

Discussion and Conclusion

In this research to explore the world that ancient siddha management for snake bites such as 64 types of snakes and its management for bites. This research results were recorded as; 106 plant raw materials, 15 minerals and 14 animal products recorded for snake bite management. In plant raw material most common plants are occupied Fabaceae(14), Euphorbiaceae(6), and other 52 families. And *Acorus calamus* repeated 12 times, *Allium sativum* used 11 times, *Piper nigrum* used 09 times which plants are most used for management of snake bites among 106 plants. 06 types of external medicines and 05 types of internal medicines were list for management on Snake bites. In external medicines, fomentation and poultices are most commonly prescribed and internally Fresh Juice (*Chaar*) and Hard Paste (*Karkam*) were most commonly used for snake bite managements. And especially route of medicine administration was nasal, eye drop and other part of the body than the oral route.

Finally concluded as siddha medical system dealing with management of snake bites with plants, metals, minerals and animal products in ancient time which management protocols should be established with proper scientific evidence based in future for man-kind purpose to world.

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Appendices

Vasambu (*Acorus calamus*)



Poondu (*Allium sativum*)



Milaku (*Piper nigrum*)



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