Determination of the success of traditional toxicology practice

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ABSTRACT

Traditional medicine is an inexpensive, safe and culturally accepted medical system. The World Health Organization has suggested to practice traditional medicine. Currently *Siddha, Ayurveda*, *Unani* and *Deshiya sikitsai* are practicing and existing in Srilanka. *Nanjiyal* (Toxicology) in Siddha system were consists of plant, metal and mineral toxins and animal's venoms. Traditional practitioners rarely practicing the Siddha toxicology in northern and eastern part of Srilanka. Dr.Mrs.K. Thavamanidevi is a traditional practitioner ,4th generation Reg 7111, practicing*Visakadi vaithiyam (V.V)*. Focus is to assess the favorable result through traditional toxicology practice. Data were collected from the practitioner orally and from the records which were maintained by her. *Akaththiyar kulambu, Neelakandan maththirai and Thalankaai ennai* are using in *V.V* by the practitioner . Out of 145patients of both sex 13.1% of male and17.24 %of female were highly affected by scorpion bite 1.37 %of male and 0.68% female were lessley affected by the Snake bite. ,Taste of the plants using in animal venom as follows57 %of bitter and 19% of astringent. Actions of plants as follows13.04 %of antidode action and 10.1% of antiseptic action.According to the study effective of the above mentioned plants and the preparations by the traditional practitioner are showing effective for animal venom poisoning methods as indicated by pharmacological action, taste of ingredients, that are using by the practitioner and also cured patients' statistics in various poisonous bite. Studies like this may through new light to standardize the traditional toxicology practice.

Key words: *Nanjiyal, Akathiyarkulambu, Neelakandamathirai, Thalankai ennai*

INTRODUCTION

Traditional medicine is an inexpensive, not expose to danger and culturally accepted medical system. Because of that, the World Health Organization (WHO) was suggested to practice traditional medicine in worldwide [1]. At this moment in time *Ayurveda, Siddha, Unani* and *Deshiya sikitsai* (Srilankan Traditional medicine) are practicing in Srilanka [2]. *Siddha* system of medicine is Unique to Tamilnadu and northern and eastern part of Srilanka. For several centuries, in Tamil's populated in rural areas traditional healing practices happening. It relies substantially on plant, herbal based medicines [3]. *Nanjiyal* (Toxicology) in Siddha system were made up of two types poisons. They are plant, metal and mineral toxins and animal's venoms. Venom having animals are insects, scorpions, snakes, worms, rat and bees etc. The ancient people life was associated with jungle. To a greater extend of human being were touched by an animals and insects in their routine [4]. In past centuries *siddha* toxicology was well established in Jaffna peninsula. Nowadays this tradition was diminishing by poor skills and practices. Traditional healing, however, may have serious consequences in terms of delays or added complications.

Nowadays most affected patients' access formal medical care, few patients only use traditional healers. The reasons for using traditional practitioners include difficulties with transportation, cost, and inadequacy of ant venom in the formal health sector, and trust in traditional healing within the context of longstanding tradition [5].

History of toxicology in traditional medicine.

Thevars and *Asuras* were try to get *amirtham,* unfortunately it processes produced *visam.* It is more different in character and shape. It was looks very bright and golden colour. The poison has shown it's like a fire in eyes. After that, Barman destroyed them. Finally, the *visam* associated in to some plants and animals. Three branches in *Visakadi vaithiyam* (Toxicology) are *Nidanam, Manthra* and *Sikitsai* [6], [7]. Traditional toxicology knowledge is orally-transmitted, or transmitted through imitation and demonstration. The consequence is that writing it down changes some of its fundamental properties. Traditional knowledge is local. It is rooted to a particular place and set of experiences, and generated by people living in those places. The result of this is that transferring the traditional toxicology practice to other places runs the risk of dis-locating it. Characteristically shared to a much greater degree than other forms of traditional toxicology practice knowledge. Therefore, it is sometimes called `people's science'. Specialists may exist by virtue of experience with traditional toxicology practice[8]. Now rarely few numbers of traditional practitioners still were practicing in *Siddha* toxicology in Northern and Eastern part of Srilanka. Dr.Mrs .Krishnamoorthi Thavamanidevi is a traditional practitioner ,4th generation, S.L.A.M.C Reg. No7111 (*Visesa vaiththiyam*). She has been running her own clinic *Velmurugan Siddha Ayurveda* hospital in Valanthalai junction, Kaarainagar and another in Vaddukoddai. She is treating average 7 to 10 patients per a day who are affected by animal venom.

Table 1: Treatment taken for the Poisonous bite.

Name of poison	Number of patients							
	October		November		December		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Snake	2	1	-	-	-	-	2	1
Spider	13	9	7	5	1	3	21	17
Scorpion	14	18	3	5	2	2	19	25
Rat bite	2	6	4	2	1	2	7	10
Unknown	13	16	3	3	4	4	20	23
Total number of patients in a month	44	50	17	15	08	11	69	76

Table 2: Percentage ofactionsof plants using in poisonous bite

Actions	Total
Astringent	6
Antidote	9
Antiseptic	7
Expectorant	4
Alterative	5
Purgative	4
Stomachic	5
Tonic	5
Antispasmodic	4
Analgesic	5
Carminative	5
Antiperiodic	4
Stimulant	6

Table 3: Percentage of tasteof the plantsusing in poisonous bite

Taste	Total
Astringent	07
Bitter	21
Pungent	09

Objective

Assess the favourable result through traditional toxicology practice.

METHODOLOGY

This is a cross sectional study. This study was conducted from 28th of September to 28th of December 2017 at Velmurugan siddha ayurvedic Hospital, Valanthalai junction, Kaarainagar and the permission was taken to conduct the above study from Dr.K. Thavamanidevi, who was the in-charge of Velmurugan siddha ayurvedic Hospital. Data were collected from the practitioner orally and got information from the records which were maintained by the traditional practitioner.

Prepared medicines used for *Visakadi vaithiyam*by traditional practitioner

1. *Akaththiyar Kulambu* - Internal and external use
2. *Neelakandan maaththirai* –Internal use
3. *Thaalangaai ennai* - External use

RESULTS AND DISCUSSION

Collection of prepared medicines which were used to treat the poisonous bite in traditional practice are *Akaththiyar Kulambu, Neelakandan maaththirai* and *Thaalangaai ennai*. Dosage of*Akaththiyar Kulambu*were varies from green gram size to coffee seed size. Should be taken in early morning empty stomach with rice water (Washed the red rice 2 time and get 2nd water). Salt, sour and oil should be avoided in this period. Use as an external application on affected area. *Neelakandan maaththirai* as an internal medicine.1-2 *mathhirai* with various *anupanam,* itwas decided by the practitioner. *Thaalangaai ennai* was used as an external application on affected area.

Herbs that were using in various poisonous bite as follows. *Polygala elongate* leave, *Bryonia callosa*leave, *Aristolochia indica* root, *Polygala elongate* leave and *Musa paradisiacal* stem were using internally for the snake bite. *Bryonia callosa* leave, *Pavetta indica* leave, *Zingiber officinale* rhizomes, *Ocimum sanctum* leaves, *Gymnema sylvestre root*, *Pongamia pinata* root, *Aristolochia bracteolate* whole plant and *Trianthema decandra* root were used for externally. *Acalipha indica* leave, *Daemia extensa* leave, *Indigofera tinctoria* leave and root, *Acalipha betulina* leave were using internally for the spider poison. *Daemia extensa* leaves and *Pavetta indica* leaves were used for externally. *Eclipta alba* whole plant and *Indigofera tinctoria* leave were using in scorpion poisoning. *Adenama hyssopifolia* leaves and *Ocimum sanctum* leaves were used as an external purpose. *Bambusa aurindinacia* leave, *Alangium salvifolium* bark, *Clitoria ternatea* root, *Berberis aristata* root, *Curcuma domestica* rhizome and *Acarus calamus* whole plant were using in rat scratch. *Indigofera tinctoria* root used in externally. *Aristolochia bracteolate* root, *Acalipha betulina* leave *Ocimum sanctum* leaves, *Piper nigram* seeds and *Indigofera tinctoria* root were using internally for the unknown bite. *Acalipha indica* leaves, *Curcuma domestica* rhizome and *Tamarindus indicus*fruit were used as an external purpose.

CONCLUSION

Village people were commonly affected by animal venom. All aged people without any differences were affected by the different poisonous animals. Among the period of

study 145 patients came to get treatment for different poisonous bite.

According to the study *Akaththiyar kulambu, Neelakandan maththirai and Thalankaai ennai*were plays amajor role in treating *Visakadi vaithiyam* .Practitioner commence the treatment with*Akaththiyar kulambu* . Whengiven *Neelakandan maththirai*, giving different plants extracts for different poisonous bite as a vehicle. practitioner was applying the *Thalankaai ennai* at the site of bite then was fomented with steamed *Vitex negundo* (Nochchi)*Pottani*. Finally applythe various paste like aksthiyar kulambu on the site of bite.

Out of145 patients of both sex1.37 %of male and 0.68% female were affected by the Snake bite, 14.48% of male and11.72 %of female were affected spider , stringe13.1 %of male and 17.24% of female were affected scorpion bite, 4.82% of male and6.89female were affected % by rat scratch and13.79 %of male 15.86% of female were affected by rat scratch and13.79 % of male and 15.86% female were affected by unknown bite.

In poisonous bite,sucess of treatments were evaluvated by using the characters of herbs in the treatment, according to the Murukesa mudaliyar and Gunapadam mooligai iyal part-1. If we see the taste and therapeutic action of the medicinal plants which were used as Vehicle, 57% was having bitter taste and 13. 04 % was having antidode action.

Taste of the plants using in animal venom as follows, 57% of bitter taste19 %of astringent taste ,24 %of pungent taste and actions of plants as follows 8.69% of astringent and stimulant action.13,04% of antidode action, 10.1% of antiseptic action, 5.79% of expectorent, purgative,antispasmodic and antiperiodic action, 7.24% of alterative Stomachic, Tonic, analgesic and carminative actions.

According to the study effective of the above mentioned plants and the preparations by the traditional practitioner are showing effective for animal venom poisoning methods as indicated by pharmacological action, taste of ingredients that are using by the practitioner and also cured patients' statistics in various poisonous bite. Studies like this may through new light to standardize the traditional toxicology practice.

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