WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.074
Volume 7, Issue 18, 855-859. Research Article ISSN 2277– 7105

EVALUATION OF ANTI - HISTAMINE AND ANTI – INFLAMMATORY ACTIVITY USING SIDDHA POLYHERBAL FORMULATION – SHAYATHIRKU ENNAI

Dheebiga S. V.*[1], Gandhimathi S.[2], Meenakumari R.[3], Muralidaran P.[4]

[1]PG Scholar, Department of Kuzhanthai Maruthuvam, Govternment Siddha Medical College, Chennai, Tamilnadu, India.

[2]Lecturer, Department of Kuzhanthai Maruthuvam, Govternment Siddha Medical College, Chennai, Tamilnadu, India.

[3]Professor and Head of the Department, Department of Kuzhanthai Maruthuvam, Govternment Siddha Medical College, Chennai, Tamilnadu, India.

[4]Professor and Head of the Department, Department of Pharmocology, C.L.Baid Metha College, Chennai, Tamilnadu, India.

Article Received on
21 August 2018,

Revised on 09 Sept. 2018,
Accepted on 01 October 2018

DOI: 10.20959/wjpr201818-13503

***Corresponding Author**
Dr. Dheebiga S. V.
PG Scholar, Department of Kuzhanthai Maruthuvam, Govternment Siddha Medical College, Chennai, Tamilnadu, India.

ABSTRACT

Siddha system of medicine has remarkable strength in treating diseases, especially in Paediatric age group also. Many children were suffered from recurrent respiratory infections commonly includes Sura Peenisam (Sinusitis in children). The prevalence of Sura Peenisam is increasing day by day. Shayathirku Ennai is a polyherbal siddha formulation which is used in the treatment of Sura Peenisam was examined for its Anti – Histamine and Anti – Inflammatory activity in animal model. This formulation composed six herbal ingredients which is being used in the treatment of Sura Peenism and also in other respiratory infections in childrens. Hence the Anti – Histamine activity in Shayathirku Ennai was studied by using rats with control Cetirizine and the Anti – Inflammatory effects was studied by using Carrageenam induced paw Oedema in rats with standard Indomethacin. Hence the result was observed.

KEYWORDS: Siddha Medicine, Sura Peenisam, Anti – Histamine, Cetirizine, Anti – Inflammatory, Indomethacin.

INTRODUCTION

Siddha System of medicine is founded mainly on the basic principles of nature and its elements after careful and thorough study of the human system. The word 'Siddha' means, one who attains Siddhi (Perfection in life arts such as Philosophy, Yoga, Wisdom, Alchemy, Medicine and above all the arts of longevity). It may be termed as **HEAVENLY BLISS**.

In Siddha System lots of valuable medicines were given by Siddhars for so many diseases including respiratory diseases also. One of the disease occurring recurrently in children is Sura Peenisam (Sinusitis in children). It is due to many causes such as any microbial infections or a result of allergies (Pollution, Cold Exposure, etc.,).

The clinical features of Sura Peenisam may compared to sinusitis in children are Nasal Discharge, Inflammation of the mucous membrane of Sinusus, Nasal block, Heaviness of head. Now a days it is a very common disease in children world wide especially in developing countries like India. Among Indians, it is estimated that 134 million suffer from chronic Sinusitis. It affecting more than 14 percentage of School going children leads to poor day to day performance or activities.

As per Siddha Text Book "Mathalai Noi Thoguthi – Part I" – Sura Peenisam is one of the type of Peenisam in children. There are many Siddha Medicines such as single herbal medicine, Polyherbal internal and external formulations are indicated for above diseases in Siddha. One such polyherbal formulation is Shayathirku Ennai which is mentioned in the text book "Agathiyir Vaidhiya Vallathi 600" for Sura Peenisam and also for other respiratory diseases in children.

The present study was carried out to create a scientific validation of Anti – Histamine and Anti – Inflammatory activity of Shayathirku Ennai in the treatment of Sura Peenism (Sinusitis in Children).

MATERIALS AND METHODS

- Drug was selected from the literature and made into oil form under basic Siddha Principles. Then it is subjected to Anti – Histamine activity and Anti – Inflammatory activity.

INGREDIENTS

S.No	Name Of The Drug	Part Used	Botanical Name	Quantity
1	Poovanthi Pattai	Stem Bark	*Sapindus trifoliatus*	50 palam (1750) gms)
2	Eranda Ennai	Seed Oil	*Ricinus communis*	1 Padi (1.3 ltr)
3	Kadukkai	Fruit	*Terminalia chebula*	1 Palam (35 gms)
4	Kasthuri Manjal	Rhizome	*Curcurma aromatic*	1 Palam (35 gms)
5	Vanni Ver	Root	*Prosopis spicigera*	½ Palam (17.5 gms)
6	Karunjeeragam	Seeds	*Nigella sataiva*	½ Palam (17.5 gms)

Therapeutic Dosage – 5ml for 8 to 12 years twice a day.

EVALUATION OF ANTI-HISTAMINE ACTIVITY OF SHAYATHIRKU ENNAI

Vascular permeability test in rats: Immediately after an i.v. injection of 1 ml of 1 % Evans blue in physiological saline, two sites on one side of the shaved back of animals were injected intradermally with 0.1 ml of physiological saline containing 0.1 µg histamine, Contralateral sites were injected intradermally with an equal volume of physiological saline (the control skin areas). Shayathirku Ennai is given orally 30 min in rats prior to the injection of phlogistic agents. Thirty minutes later, the animals are sacrificed by overdose of anesthesia, and the skin is removed. Exudation of dye was calculated by subtracting the amount determined in the control skin area and expressed as the mean of two values obtained in each animal.

Calculation

Area of protection = control area – area of exudation of dye Grouping: Wistar rats were used for the study n=6nos Group I----------Control group

Group II----------Standard drug Cetirizine 20mg/kg Group III---------Shayathirku Ennai 100mg/kg Group IV--------- Shayathirku Ennai 200mg/kg

Anti histamine effect of Shayathirku Ennai

S.no	Grouping	Area of protection from exudation of Dye in mm
1	Control	435.12±0.22
2	Cetirizine(STD)	126.43±0.07
3	Shayathirku Ennai 100mg	286.14±0.11
4	Shayathirku Ennai 200mg	174.11±0.12

EVALUATION OF ANTI-INFLAMMATORY ACTIVITY OF SHAYATHIRKU ENNAI

For the experiment, the animals were divided into 5 groups with 6 animals in each group.

- Group-I (control) received 3% gum acacia 10 ml/kg p.o.
- Group-II (Carageenan) received 0.1ml of 1% w/v suspension of carrageenan S.C
- Group-III (standard) received Indomethacin 40 mg/kg p.o.
- Group-IV(Test-1) received SE 100mg/kg p.o.
- Group-V(Test-2) received SE 200mg/kg p.o.

All the drugs were administered orally and the volume of medicaments kept constant at 10 ml/kg body weight of the animals it was administered orally to rats 1 hr before subcutaneous injection of carrageenan. After 1 hr 0.1ml of 1% w/v suspension of carrageenan was injected into sub- plantar region of the left hind paw to all the groups. The paw volume was measured at 1, 2, 3, 4, and 5 hr using Plethysmometer (Model 7150 UGO Basile, Italy) Edema was expressed as the mean increase in paw volume relative to control animals.

PAW EDEMA VOLUME

Group	**Dose**	**Initial paw volume**	**Change in paw edema mm at different time intervals**				
		0hr	1 hr	2hr	3hr	4hr	5hr
I	Control	1.20 ± 0.14	1.20±0.14	1.20±0.14	1.20±0.14	1.20±.14	1.20±0.14
II	Carrageenan	1.21± 0.17	1.91 ± 0.21	2.27 ± 0.02	2.37 ± 0.14	2.48 ± 0.18	2.62 ± 0.17
III	Indomethacin	1.01± 0.06	2.10 ± 0.26	1.56 ± 0.15	1.47 ± 0.05	1.34 ± 0.18	1.15 ± 0.16
IV	Low dose	1.34 ± 0.11	1.36 ± 0.32	1.32 ± 0.18	1.34 ± 0.22	1.33 ± 0.22	1.38 ± 0.24
V	High dose	1.14±0.42	1.68 ± 0.22	1.52 ± 0.23	1.56 ± 0.44	1.52 ± 0.18	1.10 ± 0.12

The paw volume up to the tribiotural articulation was measured at 0, 1, 2, 3, 4, 5 hrs.

RESULT

The evaluation of Shayathirku Ennai Showed significant Anti – Histamine and Anti - Inflammatory activity in the above study.

CONCLUSION

The experimental study demonstrated that the Shayathirku Ennai has got significant Anti – histamine and Anti – Inflammatory activity. Hence our results contributed towards the validation of the Shayathirku Ennai in the treatment of Sura Peenisam (Sinusitis in Children) with this, we have to work more in future.

REFERENCES

1. Mohana Raj.T. Mathalai Noi Thoguthi(Vol.1) 1st ed. P.371.
2. Suraj gupte. The Short Textbook of Paediatrics.11nd ed 2009.jaypee brothers(p)ltd; 2

publication.P.684.

3. An on JB (April 2010 "URI".Am.J.Med123 (4Suppl):s 16-25.doi:10.10 16j. Amjmed. 2010.02.003.PM D 2 35 632.
4. Halmilos DL (OCT 2011 "Chronic rhinosinusitis:epidemiology and medical management". The journal of allergy and clinical immunology, 128(4): 693-707; quiz 708 - 9.doi :10,10 16/ j.jac .2 011.8.004 PMID 21890184.
5. Sunali s.Khanna, A.Gharpure.Correlation of incresed sinusitis and urban air polltion ind. J. sci. Res and Tech., 2012; 1(1): 14-17.
6. ISRN otolaryngology(SukhbirK.Shahid). volume 2012,10.5402/ 2012/ 851831.
7. Agasthiyar Vaithiya Vallathi 600(Moolamum Uraium) 2nd ed. New Delhi Publication: Central Council For Research In Ayurvedha And Siddha, 2005 P166.
8. Murgesa mudaliyar KS Siddha Materia medica (Medicinal plant division). 2nd ed. Indian medicine and Homeopathy publication; 2008.p.724,38,798,122,296,201.
9. Aparna Upadhya and dk. Pharmacological effects of sapindus mukorossi. Rev. Inst. Med. Trop. Sao Sing Panto, 2012; 53(5): 273-280.
10. Anubha sinha, dr.nithin jayan. Benifits of Castor oil.oct 31.2013. Medindia.net.
11. Amit kumar, Rajiv chomwal, pravin kumar, et al. anti inflammatory and wound healing activity of curcuma aromatic salisb extract and its formulation.journal of chemical and pharmaceutical research, 2009; 1(1): 304-310.
12. Md. Safkath Jbne jami, Zakia Sultana, Md.Ershad Ali, et al. Evaluation of Analgesic and Anti inflammatory Activites on Ethnolic Extrat of Terminalia chebula fruit in Experimental animal model. American journal of plant sci ences., 2014; 5(1): 63- 69. doi:10.4236/ ajps .2014.51010
13. Aravind kumar, Satyvan sing,sanjay kumar yadav, et al. analgesic activity of ethanalic extract of roots of prosopis cineraria(1) druce. journal of applied pharmaceutical science, 2011; 01(08): 158-160.
14. Ali BH, Blundeng. Pharmacological and toxicological properties of nigella sativa. phytother res., 2003 april; 17(4): 299-305 pmid 12722128
15. Kannu Sami Pillai C. Sikicharathna Deepam Sarakku Suthi Muraigal. 1st ed. 2011. Thirumagal Vilasa Achagam. P.27,28,29,30,31,32.
16. OP Ghai, Ghai essential paediatrics 7th edition, CBS Publishers 2010 7th Edition. Page No.335.