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ASSESSMENT OF ANTIHELMINTIC ACTIVITY OF KRIMIGHATINI VATIKA

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ABSTRACT
Introduction: Disease and death have always attracted the attention of human mind. Pathogenic micro organisms are the root cause of majority of diseases in human beings. Many naturally occurring and synthetic chemicals are discovered and developed as antibiotics to control or kill the micro organisms. Micro & macro organisms in Ayurveda are called as krimi which include parasites. There are many Krimighna dravyas used to treat krimi. The present study is carried out on Antihelmintic activity of Krimighatini Vatika to provide scientific evidence for Krimighna property in particular. **Method:** Krimighatini Vatika was prepared as per Bhaishajya Ratnavali. Antihelmintic activity was conducted on earth worms & round worms by method of Ajaiyeoba et.Al. with minor modifications. **Results:** Surprising results were noted in antihelmintic activity against Earth worms & round worms. **Conclusion:** Krimighatini Vatika has shown significant antihelmintic activity against earth worms & round worms.

KEYWORDS: Krimighatini Vatika, Earth worms, Round worms, Antihelmintic activity.

INTRODUCTION
The manifestations of all diseases are explained on the basis of Tridosha Siddhanta in Ayurveda. The quotation from Vagbhata i.e. "Rogastu Doshavaishamyam" emphasis the role of Dosha in the manifestation of disease such diseases are termed as Nija rogas. While another set of disease are mentioned namely Aganthuja Vyadhis. These are said to be caused due to exogenous factors including Krimi.[1]

Chakrapani the commentator of Charaka while enumerating few such factors mentioned "Bhootha Pishachadyam". Thus it is evident that ancient physician were well acquainted with the disease manifested from micro-organisms. These are exogenous or outside the body, but cause the disease when they enter into the body.[2]

Krimighna is an pharmacological activity under which many herbal and mineral drugs are listed and the word Krimi refer to all type of organisms both micro and macro. It becomes essential to identify the drug with Krimighna activity on which type of Krimi drugs act on.

Number of Krimignarasaaushadhis are mentioned in Ayurvedic classics like Krimikuthar[3], Krimighatini[4] etc. Concept of Krimi refers to both macro and micro organisms in Ayurveda. Krimighatini Vatika is expected to be potential in Antihelmintic activity. Hence to provide evidence base for classical reference, effective and economic medicine to the practioner, a study entitled "Assessment of a Antihelmintic activity of Krimighatini Vatika" will be undertaken.

MATERIALS AND METHOD[5-12]
Materials

A. Drugs

1. Test drug – Krimighatini Vatika
2. Standard drug- Albendazole along with saline NA0.91%Nacl

B. Worms

1. Earth worms
2. Round worms

C. Equipments / Glass wares

1. Petri dish
2. Round bottom beaker
3. Timer or watch

Method

The antihelmintic assay was carried as per method of Ajaioba et. Al. with minor modification at BLDEA's AVS PGCRC Ayurveda Mahavidyalaya, Vijayapur.

Earth worms are identified & provided by Dept. of Entomolgy, College of Agriculture, Hitnalli, Vijayapur Dist. Karnataka. All the earth worms were of Approximately equal (10-12cm) in size & active. They were washed with saline before experiment.

Round worms were collected from poultry farm and they were washed with saline before experiment.The test drug solutions were prepared freshly before starting the experiments. A group (4 no) of round worms & earth worms (8 no) approximately equal (10 to 12cm) in size & active, were released into 100% of 25 ml test drug (Krimighatini Vatika) in a separate beaker. Albendazole was used as reference standard. Determination of time of paralysis and time of death of worms were observed. Time of paralysis was noted when no movements of any sort could be observed except when the worms were shaken vigorously. Time for death of worms was recorded after ascertaining that worms neither moved when shaken vigorously nor when dipped in Warm water (50 degree C) followed with fading away of their body colour.

OBSERVATION AND RESULTS

Table: Showing the time of paralysis and time of death in different samples on Earth worms and Round worms.

Sr.No.	SAMPLES	EARTH WORMS (ANNELIDA)		ROUND WORMS (NEMATODA)	
		TIME OF PARALYSIS	TIME OF DEATH	TIME OF PARALYSIS	TIME OF DEATH
1)	Test Drug 10 mg/ml	68 mins	83 mins	146 mins	163 mins
2)	Test Drug 20 mg/ml	45 mins	65 mins	128 mins	145 mins
3)	Test Drug 30 mg/ml	33 mins	51 mins	113 mins	130 mins
4)	Test Drug 50 mg/ml	20 mins	34 mins	102 mins	119 mins
5)	Standard Drug 10 mg/ml	----	----	87 mins	104 mins

Report: Albendazole does not have any antihelmintic action on Earth Worms even after 12 hrs observation.

DISCUSSION

Krimighatini Vatika also subjected for **Antihelmintic activity** by following Ajaiyeoba et.al method with minor modification, on earth worms & round worms. Significant Antihelmintic activity was demonstrated by Krimighatini vatika.

Duration of paralysis of earth worms in test drug group i.e. (10mg/ml, 20mg/ml, 30mg/ml, 50mg/ml) was (68 mins, 45 mins, 33 mins, 20 mins) respectively. And for round worms in test drug group i.e. (10mg/ml, 20mg/ml, 30mg/ml, 50mg/ml) was (146 mins, 128mins, 113 mins, 102 mins) respectively. In standard drug group Albendazole it was 87 mins for round worms.

Earth worms died in test drug group i.e. (10mg/ml, 20mg/ml, 30mg/ml, 50mg/ml) was (83 mins, 65 mins, 51 mins, 34 mins) respectively. And for round worms in test drug group i.e. (10mg/ml, 20mg/ml, 30mg/ml, 50mg/ml) was (163 mins, 145 mins, 130 mins, 119 mins) respectively. In standard drug group Albendazole it was 104 mins for round worms.

CONCLUSION

Its significant Antihelmintic activity was observed against Earth worms & Roundworms. Albendazole does not have any Antihelmintic action on Earth worms even after 12 hrs, observation.

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