An Investigation on Ethno-Veterinary Medicinal Plant of Practices of *Pedalium murex* L. From Namakkal District, Tamilnadu, India

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Abstract
Ethno-veterinary medicinal plant used to treat for diarrhoea disease from Namakkal district, Tamilnadu, India. The paper deals with ethno veterinary medicinal plant of *Pedalium murex* L. practices to treat cattel for diarrhoea disease. The present work was carried out as the first attempted to explore of *P. murex* L. of ethno-veterinary interest and to record the traditional ethno-veterinary knowledge in cattle for diarrhoea disease. The collection of pharmacological data from this study area of Namakkal district can provide a basis for the integration of Mattu vaithiyar uses in the alternation veterinary medicine this valuable information of ethno veterinary medicine can utilized future use made by pharmaceutical companies.

Keywords

INTRODUCTION
Ethno-veterinary practices are the community based indigenous knowledge and the use of medicinal plants and procedures applied for their preparation was transmitted from generation to generation. It has been reported that as many as 70% (90% in some communities) of the world population continue to rely mainly on their own localized ethno medicine for personal as well as veterinary healthcare. Ethno-veterinary medicine was practiced as early as 1800 B.C at the time of King Hamurabi of Babylon who formulated laws on veterinary fees and charged for treating cattle and donkeys. Cattle are the common livestock in India and occupy a prominent position in agricultural system and economy of the country. Their products are indispensable in our daily life. The traditional drugs for animals based on both plant and animal products have received less attention. Ethno-veterinary medicine often provides cheaper options compared to western drugs and the products are locally available and more easily accessible. In the face of these and other related factors there is increasing interest in the field of ethno veterinary research development [1-3]. An earlier study done by
Bhatt [4] recorded various ethno veterinary plants used by the tribal’s of Gujarat, again reported so many plants in India for the treatment of various diseases in livestock [5-8]. The ethnic people frequently depend on traditional knowledge for the management of animal health problems and to improve their productivity. Ethno-veterinary medicine deals with people’s knowledge, skills, methods, practices and beliefs about the care of their animals. Ethno-veterinary medicine often provides cheaper options than comparable western drugs, and the products are locally available and more easily accessible. In the face of these and other factors there is increasing interest in the field of ethno-veterinary research and development [9-11]

In recent years, interests in ethno-veterinary investigations have been increased enormously on national and international level. Ancient ethnobotanical literature suggests that the tribal, non-tribal and rural populace has been using wild ethno flora since long ago for curing various diseases and disorders in the pet/domesticated animals. All these plants should be screened scientifically in order to investigate newer sources of ethno-veterinary drugs and medicines. Fortunately, since last three to four decades considerable progress has been made in the ethno-veterinary sciences due to recent ethnobotanical and ethno medicinal explorations [13]

The present study was aimed at collections of plants, preparation of drugs and information of traditional ethno-veterinary practice in Namakkal district, Tamil Nadu, India. This study area that no scientific report has been done indegous knowledge of veterinary remedies to treat cattle for diarrhoea disease. *Pedalium murex* L. have been not explored on ethno-veterinary practice for cattle disease. The present work was carried out as the first attempted to explore of *P. murex* L. of ethno-veterinary interest and to record the traditional ethno-veterinary knowledge in cattle for diarrhoea disease.

**MATERIALS AND METHODS**

**Study area**

Namakkal district is an administrative district in the state of Tamil Nadu, India. The district was bifurcated from Salem district with Namakkal town as headquarters on 25-07-1996 and started to function independently from 01-01-1997. The district has 6 taluks (subdivisions); Tiruchengode, Namakkal, Rasipuram, Velur, Kolli hills, Sendamangalam (in descending order of population) and has two revenue divisions; Namakkal and Tiruchengode [Fig 1]. The district is bounded by Salem on the north, Karur on the south, Trichy and Salem on the east and Erode on the West. The geographical area of the district is 3363.35 Kms which lies between 11.0° and 11.36° north latitude and 77.28° and 78.30° east longitude. For administrative purposes, the district has been divided into 2 revenue divisions, 4 Taluks, 30 Revenue firkas and 454 revenue villages (Including group Villages). For local arrangements, the district has been divided into 5 municipalities, 15 panchayats unions, 19 town panchayats and 331 village panchayats.

**Field visit**

Field visit were undertaken to different location of villages. Information about the plant possessing anti-diarrohea disease activities were collected from tribes and native medicine men.

**Plant identification**

The study plant was identified with the help of available Indian literature and the identified were verified with the help of Rapinet Herbarium, St. Joseph’s College, Tiruchirapalli, Tamil nadu, India. Herbarium specimen was deposited in the Rapinet Herbarium, St. Joseph’s college, Tiruchirapalli, Tamil Nadu, India. The plant herbarium number was obtained (*Pedalium murex* L.) [ RHT 29241].

**Preparation of powder of *P. murex* L.**

The collected leaves of *P. murex* L. was shade dried at room temperature for 3 days and sundry for 3 days and then milled in to coarse powder by a mechanical grinder [14].

**Ethno-veterinary treatment to diarrhoea disease**

This method was used by Toyang et al [15]. Drenching is the oral administration of ethno-veterinary drugs in a liquid form 40 gm powder of *P. murex* L. mixed with distilled water. After measuring the aqueous extract of *P. murex* L., it is given to the cattle by using “Kathukkuvalai”. It is easily done by raising the Kathukkuvalai into the mouth. Inserting two fingers on the other side of the mouth to press the tongue downwards, helps to hold mouth open pour the aqueous extract of *P. murex* L. gently at intervals.

**Photography**

Photography were taken for the macroscopic characters and morph metric characters of the plants with the help of sony cyber shoot camera and colour print outs were made.

**RESULTS AND DISCUSSION**

*Pedalium murex* L. is a much-branched herb 15-38 cm. high; stems and branches offer slightly rough with scaly glands [Fig-2]. The fruit is used as a demulcent, diuretic, antiseptic and aphrodisiac. A
Aqueous extract of whole plant part of Pedalium murex orally treated to 10 cattle for diarrhoea disease. In aqueous extract of P. murex most significant effective against for diarrhoea disease within 3-4 days.

The ethno veterinary pharmaceutical data about the usage of P. murex to treat the diarrhoea disease in cattle. In the present study is a preliminary and first report. Use of study plants explained by Mattu vaithiyars are not yet been explored. But the collection of pharmacological data from this study area of Namakkal district can provide a basis for the integration of Mattu vaithiyar uses in the alternation veterinary medicine this valuable information of ethno veterinary medicine can utilized future use made by pharmaceutical companies.
Fig-1. Study area of Namakkal district

Fig-2

A. Habit and Habitat of *P.murex* L.
B. Single twig with flower of *P. murex* L.

C. Single twig with fruit of *P. murex* L.

Fig-3

A. Diarrhoea with cow in Muthukalipatty village at Namakkal district.
B. Oral administration of 40 gm powder of aqueous extract of *P. murex* L. by kathukkuvalai.

C. After 3 days diarrhoea disease cured to cow.

**Fig-4**

A. Diarrhoea with cow in Kattukottai village at Namakkal district.
B. Oral administration of 40 gm powder of aqueous extract of *P. murex* L. by kathukkuvalai.

C. After 4 days diarrhoea disease cured to cow.

Fig-5

A. Diarrhoea with goat in kattur village at Namakkal district.
B. Oral administration of 20 gm powder of aqueous extract of *P. murex* L. for diarrhoea.

C. After 3 days diarrhoea disease cured to goat.

Table 1: Aqueous extract of aerial parts of *Pedalia murex* L. orally treated to cattle.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Farmers name</th>
<th>Village</th>
<th>Cattle</th>
<th>Aqueous extract</th>
<th>Cured days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dose</td>
<td>Times of dosage</td>
</tr>
<tr>
<td>1</td>
<td>M.Rani</td>
<td>Kattur</td>
<td>Cow</td>
<td>40 gm</td>
<td>4-6 times</td>
</tr>
<tr>
<td>2</td>
<td>A.Sakthivel</td>
<td>Kattur</td>
<td>Goat</td>
<td>20 gm</td>
<td>3-5 times</td>
</tr>
<tr>
<td>3</td>
<td>C.Murugan</td>
<td>Kattukottai</td>
<td>Cow</td>
<td>40 gm</td>
<td>4-6 times</td>
</tr>
<tr>
<td>4</td>
<td>A.Janairthan</td>
<td>Kattur</td>
<td>Buffalo</td>
<td>40 gm</td>
<td>4-5 times</td>
</tr>
<tr>
<td>5</td>
<td>P. Ramesh</td>
<td>Kattukottai</td>
<td>Goat</td>
<td>40 gm</td>
<td>3-5 times</td>
</tr>
<tr>
<td>6</td>
<td>T. Jakathiesh</td>
<td>Murungapatty</td>
<td>Cow</td>
<td>40 gm</td>
<td>4-6 times</td>
</tr>
<tr>
<td>7</td>
<td>A.Vankadesh</td>
<td>Muthukalpatty</td>
<td>Cow</td>
<td>40 gm</td>
<td>4-5 times</td>
</tr>
<tr>
<td>8</td>
<td>S. Saker</td>
<td>C.S puram</td>
<td>Calf</td>
<td>40 gm</td>
<td>3-5 times</td>
</tr>
<tr>
<td>9</td>
<td>P. Baby</td>
<td>Kattukottai</td>
<td>Goat</td>
<td>20 gm</td>
<td>5-6 times</td>
</tr>
<tr>
<td>10</td>
<td>K. Vaithie</td>
<td>Agravaram</td>
<td>Cow</td>
<td>40 gm</td>
<td>4-6 times</td>
</tr>
</tbody>
</table>
CONCLUSION
The study plant could be selected for screening to identify active phyto-chemical compounds and develop new drugs. Further researcher on Pedalium murex can help in the development of effective medicine for cattle forming to diarrhoea disease.

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REFERENCES