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Floristic Survey: The Treatment of Gastrointestinal Disorders

Veeranna B Shettar, Ranjith Y, Parameswara Naik T

Department of Botany, Sahyadri Science College, Kuvempu University, Shivamogga, Karnataka, India

ABSTRACT: The present study showed the diversity and importance of plants used to treat gastrointestinal disorders in Shivamogga district of Karnataka. We documented a total of 36 species belonging to 25 families and 33 genera used to treat gastrointestinal disorders in Shivamogga area. Among the plant parts used for gastrointestinal disorder leaf used the highest number (12), followed by fruit (7), rhizome (4), whole plant (4), root (3), seed (2), bark (1), vegetative bud (1), stem/bark (1) and fruit/twigs (1). Further, the existing information on traditional uses of medicinal plants are declining rapidly because of the lack of interest of young people to learn the traditional knowledge from the old medical practitioner. So the documentation and conservation of the information is essential.

KEYWORDS: Ailments, Diversity, Plants, Gastrointestinal Disorders & Shivamogga District

I. INTRODUCTION

The plants extracts have been used as therapeutic agents. Many medicines presently prescribed by physicians are either directly isolated from plants or are artificially modified versions of natural products (Wang et al., 2007). These medicines are safe and environment friendly. As per the WHO about 80% of the world's population relies on traditional medicine for their primary health concern (Behera 2006). Herbalists and indigenous healers have used botanical medicines traditionally worldwide for the prevention and treatment of different pathologies. Clinical research has confirmed the efficacy of several plants for the treatment of gastro duodenal problems and their therapeutic effects (Kanner and Lapidot 2001; Gurbuz et al., 2000; Devi Prasad et al., 2013). The main objective of this study is to record the different types of plants used for the treatment of gastrointestinal disorders for the first time in Shivamogga district. Karnataka. As a result, new traditional therapies for digestive system diseases wererecorded.

II. METHODOLOGY

Shivamogga district is situated in Karnataka state of India (Figure 1). A major part of Shivamogga district lies in the Malnad region of the Western Ghats. Shivamogga city is its administrative centre. Shivamogga district is a part of the malnad region of Karnataka and is also known as the 'Gateway to Malnad' or 'Malenaada Hebbagilu' in Kannada. The district ranks 9th in terms of the total area among the districts of Karnataka. It is spread over an area of 8465 km² (National Informatics Centre, 2007). Shivamogga lies between the latitudes 13°27' and 14°39' N and between the longitudes 74°38' and 76°04' E at a mean altitude of 640 meters above sea level (National Informatics Centre, 2007). The peak Kodachadri hill at an altitude of 1343 meters above sea level is the highest point in this district. The present study is an attempt to know the documentation of plants used for digestive disorders in Shivamogga district of Karnataka. Local traditional healers for treating piles were often visiting the areas of the district to collect plant species. Periodic field surveys were carried out during July 2017 to December 2017. Data were collected through local herbal practitioner, village elders and native medicine men residing around Shivamogga areas through personal communication. Standard methods were followed for the collection of plant materials and preservation of plant species. Voucher specimens were collected identified, by referring standard flora (Hooker, 1884; Gamble, 1936; and Saldhana, 1984).

III. EXPERIMENTAL RESULTS

There are many common floristic medicines used against gastrointestinal disorders. Table 1 depicts the list of plants used for the treatment of dysentery, diarrhoea, stomach pain and worms. A total of 36 species of plants belonging to 25 families and 33 genera used to treat gastrointestinal disorders in Shivamogga area of Karnataka.

Abutilon indicum leaf extract is given for 3 days to cure stomach pain. *Achyranthes aspera* leaf juice is given with butter milk for 3 days to control dysentery. *Aegle marmelos* fruit pulp with pepper powder is given for indigestion. *Aloe vera* leaf gel taken for 40 days to cure piles. Tender buds of *Calotropis procera* ground with salt and pepper are given to cure stomach pain.

Cynodon dactylon root extract is given with little sugar and cardamom to control dysentery. *Cyperus rotundus* rhizome powder is mixed with butter milk taken for 2-3 days to cure dysentery. Whole plant extract of *Euphorbia hirta* mixed with ghee and sugar to cure piles. *Ficus religiosa* leaf ground with jiggery to control stomach pain. Leaf juice of *Leucas aspera* mixed with little rock salt to control stomach pain. *Mangifera indica* seed powder mixed with butter is taken to treat piles.

Leaf extract of *Moringa oleifera* mixed with honey and tender coconut water to control dysentery. While, root paste of *Nerium indicum* is applied to piles to reduce pain. *Opuntia dillenii* riped fruit juice boiled with little sugar and is given to cure piles. Young twigs of *Punica granatum* eaten with little salt to cure stomach pain. *Psidium guajava* leaf grind with butter milk and taken to cure piles.

Holarrhena antidysenterica stem and bark powder is used to cure stomach problems. *Oxalis corniculata* leaf decoction is given to control dysentery. Seed powder of *Pongamia pinnata* is used to kill pinworm. Rhizome powder of *Zingiber officinale* is taken with hot water for indigestion until cured.

Kavitha et al., (2004) isolated alkaloids from the ethanolic extract of *Holarrhena antidysenterica* seeds, evaluated and confirmed the activity against *E. coli*. Mamtha et al (2004) was observed broad spectrum activity of *Centella asiatica* against a wide range of enteric pathogens. In indigenous system Dandamudi et al., (2010) revealed the antioxidant activity and total phenol content in *Pongamia pinnata* flowers. Devi Prasad et al (2013) reported a total of 32 plant species which are used for the problems of digestive disorders by the five major tribes of Wayanad district, Kerala.

IV. CONCLUSION

The present study reports a total of 36 plants belonging to 25 families are used against gastrointestinal disorders. The peoples of Shivamogga district are dependent on these plants for this ailment and proved to be effective. The most of the flora used for the treatment of gastrointestinal disorders by the elder peoples in the district are *Aegle marmelos*, *Achyranthes aspera*, *Cynodon dactylon*, *Citrus limon*, *Punica granatum* and *Zingiber officinale*. Hence, further pharmacological and clinical studies can be taken up for the plants in the formulation of new medicines for gastrointestinal disorders.

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