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Some herbal remedies for treatment of humans and cattle in Jamalpur district, Bangladesh

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Abstract

Even following the advent of allopathic medicine, folk medicine still plays an important role in the health-care of humans and animals in Bangladesh. Folk medicine is often called herbal medicine, because the practitioners mainly rely on phytotherapeutic treatments. The present study documents the use of three formulations to treat three human and one cattle disease by a folk herbalist in Jamalpur district, Bangladesh. The human diseases treated were leucorrhoea, chronic dysentery, and hemorrhoids (piles), while the cattle disease treated was swelling of cow's udder. Various aspects of the treatments including scientific validations, if any, are discussed.

Keywords: Herbal medicine, phytotherapy, Jamalpur, Bangladesh, medicinal plants

Introduction

Since its advent about 200 years ago, allopathic medicine has brought tremendous changes both in the treatment and conception of illnesses. However, after about 200 years of continuous and more or less uninterrupted success, allopathic medicine has started to face major difficulties. These difficulties stem from high costs of allopathic medicines, numerous adverse effects, emergence of new diseases and drug-resistant vectors, and the fact that allopathic medicine is not able to reach most rural people or people living in remote areas due to non-availability of modern diagnostic centers, hospitals, and surgical units.

On the other hand, since time immemorial and possibly from the first appearance of hominids on the world stage, at various stages of evolution, they have depended on plants to meet their medicinal needs. It is very much possible that since the great apes of today like the gorillas and chimpanzees, suffer from diseases, the earliest human ancestors or the Australopithecines also suffered from diseases, and like the great apes of today used plants to cure various ailments [1-2]. From possibly trial and errors and rudimentary starts arrived what are known as the various traditional medicinal systems of various countries like the Ayurveda, Siddha and Unani in India and Kampo in Japan. However, these traditional medicinal systems have become to an enormous extent 'formalized' that is they have been codified with appropriate institutionalized training.

On the other hand, another form of 'non-formalized' traditional medicinal system exists in almost every country of the world, namely folk medicine (FM), which is basically tribal medicine (TM) of the mainstream population. Folk medicinal practitioners (FMPs) do not need formal training or permission to practice; they mostly use plants for treatment. To some FMPs are 'quacks'; to others, they are more knowledgeable in curing diseases than allopathic doctors. Their use of plants varies widely; it is like every FMP has his or her own repertoire of plants [3-32]. Anecdotal evidence in Bangladesh indicates that a patient with poor prognosis and told as such by allopathic doctors invariably visits a FMP for treatment. It is also logical that FMPs will not be able to last for long if their treatment results in more harm than help; moreover, FM has been running for centuries with the accumulated knowledge being transmitted orally (before writing was invented) and later on in writing from generation to generation. It was the objective of the present study to document the practices of a small-time FMP in Gunaritola village in Jamalpur district, Bangladesh, who treated both humans and cattle with plants.

Methodology

Our informant was Mokhlesur Rahman, male, age 52, residing in Gunaritola village, Jamalpur district, Bangladesh. His main occupation is agriculture with folk medicinal practice as a source of side-income. Informed consent was first obtained from the FMP as to publication of information provided by him including his name, age and phytotherapeutic information. The consent was facilitated by the FMP and a number of the village residents being known to one of the authors (KJ). Plants were shown by the FMP, their uses recorded in field notebooks, followed by photographing the plant from different angles. Local names of the plants were obtained from the FMP. Plant parts were also collected, dried and pressed and brought to Dhaka for identification by a competent botanist at the University of Development Alternative. All information obtained was re-verified in

evening sessions conducted with the FMP. Plant specimens were deposited with the Medicinal Plant Collection Wing of the University of Development Alternative.

Results

The FMP was observed to use a total of three plants to cure three human ailments and one cattle ailment. The human ailments treated were hemorrhoids, leucorrhea, and chronic dysentery while the cattle ailment was swelling of a cow's udder. The results are shown in Table 1 and demonstrate that very simple formulations and preparation modes were used for treatment. The FMP claimed to derive his phytotherapeutic knowledge from his father; however, his father, according to him, was much more knowledgeable about the therapeutic properties of plants.

Table 1: Medicinal plants and formulations of the Jamalpur FMP

Scientific Name	Family Name	Local Name	Parts used	Ailments treated
<i>Achyranthes aspera</i> L.	Amaranthaceae	Ubud nangra	Whole plant	Hemorrhoids. Whole plant is macerated to obtain juice. Juice is mixed with goat milk till volume is approximately 1.5 liter. The mixture is then taken orally in small amounts during the whole day.
<i>Tagetes erecta</i> L.	Asteraceae	Ganda	Leaf	Leucorrhea, chronic dysentery. Leaves are macerated to obtain juice. One glass of juice (about 250 ml) is taken with sugar orally for seven days.
<i>Musa sapientum</i> L.	Musaceae	Kola	'Motha' (part of the plant just beneath the surface of the soil)	Swelling of cow's udder. 'Motha' is macerated and topically applied to the swelled udder.

Discussion

Hemorrhoids are also known as piles and are swollen veins in the lower part of the anus and rectum. In Ayurveda, the plant is known as 'apamarga' and among other diseases used for treatment of piles [33]. The anti-inflammatory and wound healing properties of the plant [34] can contribute to the plant's having a pain and swelling relieving effect during hemorrhoids. The pastoral people of Telengana State, India, also use the plant to treat piles [35].

The FMP used the plant *Tagetes erecta* to treat leucorrhea and chronic dysentery. Both diseases may be caused by microorganisms. Diseases such as gonorrhoea and Chlamydia are major causes of leucorrhea. Anti-bacterial activity has been reported for ethanol extract of different parts of the plant [36]. An anti-bacterial flavonoid, patulitrin, has been reported from the flowers of the plant [37].

Swelling of cow's udder is known as udder edema and caused by excessive accumulation of fluid in extravascular spaces of the udder and adjacent tissues. There is a possible connection between udder edema and oxidative stress [38]. Different parts of *Musa sapientum* have been reported to demonstrate anti-oxidant activity [39]; the plant may therefore prove useful in udder edema.

It has been shown repeatedly in our various reports [3-32] that the phytotherapeutic practices of folk and tribal medicinal practitioners of Bangladesh are increasingly validated through scientific studies. Such validations can help in conservation and rapid development of herbal medicines in the country.

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