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Traditional Beliefs and Scientific Experiments On Kolakhar: A Short Review.

Pallab Kalita*¹, Saikat Sen¹, and Chandi Charan Kandar².

¹Department of Pharmacy, Assam down town University, Guwahati, Assam, India

²Institute of Pharmacy, Department of Pharmaceutical Chemistry, Jalpaiguri, W.B, India

ABSTRACT

Kolakhar is a food additive which is making from the ashes of banana plants. Due to its alkaline in nature, people use it to wash clothes and locally it is used as an antacid. Traditionally in Assam, villagers are used to treat disorders of stomach, respiratory tract disorders and as an antimicrobial agent. This review is enlisted the different scientific experiments on *kolakhar*.

Keywords: *kolakhar*, traditionally, disorders

*Corresponding author

INTRODUCTION

In the primary health care system of resource poor communities, traditional medicine has playing a vital role because of the most affordable and easily accessible source. The local people have a long history of traditional plant usage for medicinal purposes. The use of plants for medicinal purposes is very old. From 4000 - 5000 B.C. It was found that peoples are using the herbs for therapeutic uses and Chinese used first the natural herbal preparations as medicines. In India, however, earliest references of use of plants as medicine appear in Rig-Veda, which is said to be written between 1600 - 3500 B.C [1].

Assamese society was mainly rural and agricultural by nature. They take boiled, alkaline and sour preparations alternatively. *khar* or alkali, *tenga* or sour and *teeta* or bitter were given prime place in Assamese cuisine. *Khar* was an indispensable food item of the region. It is served as the first course to be taken with rice. The ashes of dried bark and root of the plantain tree contain alkaline properties. The people used to preserve the ash-leach for its salty and alkaline properties [2].

Kolakhar is a traditional ingredient and a popular food additive in Assam, India. This is made by filtering water through the ashes of a banana tree (the name derived from the local term of Banana, "kol" or "kola"). It can be made from banana stem, rhizome and peel. Amongst the available varieties of banana in North East region, *khar* made from *Musa balbisiana* Colla (a wild variety heavily seeded banana tree) has the best quality[3].

Traditional beliefs on kolakhar-

Kolakhar (KK) is a traditional soda of Assam. Locally, it is prepared from banana tree. KK is widely used as a detergent or soaps from ancient time to wash cloths and hair. Traditionally, it is used as a food additives, especially as a boiling agents. In the rural part of Assam, KK is familiar to treat stomach disorder, respiratory tract disorder and as an antibacterial agents. It is also used as a pesticides in different agricultural fields [7]. people from the different rural areas of Assam, believed that this product also having the analgesic activity[3].

Recent Studies about Kolakhar

Physico-Chemical Parameters of *kolakhar* –

Bhagwat et. al. (2014), studied about the Physico-Chemical Parameters of *kolakhar*. According to them preparation (whole plant) was found to contain high amount of alkali elements and significant quantity of vanadium and zinc .The bioactivity of *kolakhar* may be attributed to its very high pH due to its metal content. The bioactivity of *Kolakhar* attributed to its high alkalinity which is mainly due to its alkali element such as potassium, sodium, calcium, carbonate, chloride etc [4].

Kolakhar as a use as a salt substitute-

Neog and Deka (2013), explained *kolakhar* (whole part) as a Salt substitute. A sample of *kolakhar* derived from this ash showed that K^+ and CO_3^{2-} , 19.4% and 13.4% respectively. Al and Fe are the only two trace elements present in significant amount in *kolakhar* [5].

Chemical and spectroscopic investigation of *kolakhar* -

Deka (2007) done a study about Chemical and spectroscopic investigation of *kolakhar* and its commercial importance. According to his study, he found potassium carbonate and many trace materials including vanadium in *kolakhar* [6].

Phytochemical Constituents And Antioxidant Activities -

The phytochemical constituents and antioxidant activities of *kolakhar* was investigated. Different phytochemical constituents (saponine and flavonoid) were found in the *kolakhar*. The *kolakhar* was checked

for its antioxidant activity in two model systems i.e. in DPPH method and reductive ability. Kolakhar showed in vitro antioxidant activity in Dose dependant manner [7].

Antilice activity-

100% mortality of human head lice, *Pediculus humanus capitis* was observed with benzyl benzoate standard drug, where as the maximum average mortality for the *kolakhar* was seen at concentration of 20% in 80 minutes. However, all the extracts were found to be anti-lice effective dose dependently [8].

Anthelmintic activity-

As compare to albendazole, the therapeutic efficacy of *kolakhar* is low but it showed the great potential as a anthelmintic properties. In a dose dependent manner, the activity was also increased in case of standard and as well as in the test group. *Kolakhar* at a concentration of 60mg/ml showed paralysis at 4.78 minutes and death of earth worm at 60.25 minutes [9].

Antimicrobial activity-

Preliminary screening for antimicrobial activity showed that the *kolakhar* exhibited maximum inhibitory zone (21.00 mm) against *Staphylococcus* [10].

Antacid activity-

The study was investigates the antacid effect of the *kolakhar* by using a modified artificial stomach model. The neutralisation effect, duration of neutralisation effect and capacity were found to be higher for *kolakhar* than sodium bicarbonate. *Kolakhar* showed good potential as an antacid [10].

CONCLUSION

From the investigations, it was found that *kolakhar* showed different pharmacological activities. Traditional beliefs behind the use of *kolakhar* are scientifically proven by the current experiments. Elementary analysis showed the different element present in *kolakhar* which may be responsible for pharmacological activities and its act as health promotive factor. With more investigation and proper scientific formulation of *kolakhar* may be give a good herbal therapeutic agents.

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