

## Traditional use of fish based ethnomedicine in the treatment of some diseases in Eastern Tarai of Nepal

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### Abstract

Nature has provided resources for human beings to use them in manifold ways making their life to run smoothly in whatever ways they can by preserving the things they use. Fish is an easily available aquatic vertebrate which is of much concerned stuff with rural peoples who not only relish fish stuff but use traditionally whole body of the fish or extract of some parts in the treatment of diseases. Nine species of fish have been recorded in the Tarai region of eastern Nepal to have been used in the traditional medicine for the treatment of diseases.

**Key words:** Fish, ethnomedicine, traditional treatment

### Introduction

Since time immemorial people have unbroken attachment with natural resources like fish. They consider fish one of the most important natural stuffs which is rich in different essential chemicals required for human health. Their relationship with fish is exhibited by their behaviors such as traditional ways of fishing, eating fish, using fish extract in the treatment of several common diseases. However, it is still in preserved condition in rural people of Tarai region of eastern Nepal. Because of great achievement of medical science, the access to reach to obtain medicines has been easier than in the past but rural people are still in favour of traditional treatment of several diseases by using fish extract, which they consider more effective and priceless natural medicine. The traditional uses of fish extract in the treatment of diseases is going to be out dated gradually in our country but it is still in original condition in other parts of the world. The scientific literature pertaining to traditional use of fish extract in the treatment of diseases is scanty. However, the works of (Pushpangadan, 1990; Selxas and Begossi, 2001; Lev, 2003; Kakati, *et.al.*, 2003; Costa-Neto, 2004; Alves, 2009; Alves and Rosa, 2007; Padmanadham and Sujana, 2008; Mahadewar and Jaroli, 2008; Alves, 2009; Baie and Sheikh, 2000) deserve special mention here. A perusal of literature makes it clear that no attempt has been made on the present topic from the study area of Nepal yet.

Literature pertaining to the uses of fish products in medicine in Nepal is scanty. Though it is in practice from unknown time. Fish species used in medicine in the study area were found to be *Labeo rohita*, *Barilius spp.*, *Monopterus albus*, *Heteropneustes fossilis*, *Channa punctatus*, *Channa morulius*, *Mystus tengra*, *Sisor rhabdophoru*. In this paper ethno-medicinal values of fish have been attempted to delineate.

### Materials and Methods

The study site was confined to Tarai of eastern Nepal. To collect the information, direct contact was made with senior people of the rural society and questionnaire were used to obtain information. Observation of preparation of extract from fish species and traditional uses of the

extracts in the treatment of several diseases such as common cold, fever, arthritis, asthma, rheumatic, anaemia, sores, muscular pain, allergy, ringworm, night blindness etc. were observed and studied.

### Observations

The following observations were made in the study sites at the homes of elderly ethnomedicine practitioners.

1. Use of fish gallbladder and air bladder in combination in case of fever.

Preparation of extract from gallbladder: The whole gallbladder of *Labeo rohita* was seen to have been inserted into airbladder and was fully sun dried then the material was crushed into small pieces so as to make easy to pulverize. From pulverized material small beads of dried black paper fruit sized beads were prepared.

Method of application: Depending upon the state of fever two to three beads were prescribed to take twice or thrice a day at the lapse of twelve or eight hours

Result: In the case of normal fever, the result was quick and satisfactory.

2. Alimentary canal and brain of *Labeo rohita* in treatment of muscular pain, allergy and ringworm.

Preparation of the extract: Alimentary canal and brain of *Labeo rohita* were mixed together and squeezed together so as to extract some greasy liquid so called oil. The oil was applied to heal musculature pain by mild rubbing and warming. It was done twice a day or more depending upon the degree musculature pain. The extracted oil was also used for the treatment of the allergy and ringworm. The application in this case was different because the fish oil was soaked in a piece of clean cloth then that was warmed over the oven then the warmed cloth was put on the infected area of the body time and again.

Result: The result was satisfactory but in old cases it was time taking but appreciating result was seen.

3. *Barilius* species body oil for curing cold and asthma

For the treatment of cold and asthma: Oil was extracted from the whole body of an adult *Barilius* spp. by heating the whole body of the fish keeping over the heat of burning coal. The fish was homogeneously heated and slowly. Oil came out drop wise which was collected in a small bottle. The oil obtained above was applied for the treatment of cold and asthma. The whole body of the patient was rubbed along with the oil obtained above. The body was kept warm covering with cloth. It was done till the cold and asthma were completely cured.

Result: The result was satisfactory. Early stage treatment was more satisfactory than the late treatment.

4. *Monopeterous cuchia*(mud-eel) blood to recover heavy discharge of blood during menstruation, to cure asthma and night blindness

The traditional ethnomedicine practitioners were found to suggest patients suffering from asthma, night blindness and women suffering from heavy loss of blood during menstruation. to take mud eel blood and flesh. The mud-eel is considered as a good source of iron and protein in compared to other fresh water fishes. They said the blood of *Monopeterous cuchia* heals asthma. It also cures Night blindness. Females suffering from anemia due to heavy discharge of blood during menstruation were given the blood of this fish to recover.

5. The use of oil extracted from the body of *Mystus tengra* and *Heteropneustes fossilis* in the treatment of common cold.

Cleanly washed whole body of *Mystus tengra* and *Heteropneustes fossilis* were fried in mustered oil. The oil which came out from the body of the fishes during frying along with the mustered oil was collected in a container. The oil was rubbed on different parts of the person suffering from the cold from time to time till there was no symptom of cold.

Result: The result was better than that of other.

6. Use of carbon of fish scales in drying wounds/sores.

Fish scales were collected and burnt. The carbon of the burnt scales was collected. The carbon was carefully put around the wound or sore.

7. The use liver of *Channa morulius* in the abortion of the early pregnancy

The liver of *Channa morulius* acts as a medicine in the abortion of early pregnancy case, according to fisherman. However, those could not be ascertained.

8. Sun dried fingerlings of *Channa punctatus* and *Botia, lohachata* were ground and obtained powder which was used to dry normal sore. A paste was made and put around the sore. The sore was gradually dried.

Result: The sore was seen being dried. *Sisor rhabdophorus* tail in the treatment of pneumonia. The sun dried filamentous tail of *Sisor rhabdophorus* was turned into powder. A part of that powder was applied for the treatment of pneumonia

Result: The result was effective but slow. However, the action of the applied powder could not be studied for a long time.

### Results and Discussion

The results of application of fish oil in arthritis, body pain common cold and oral intake of gallbladder for fever, in all cases, were found satisfactory, in normal cases and in the case of early treatment. In case of chronic diseases, the effectiveness of the fish extract was seen time treatment taking treatment. It might be due to the lack of formulated amount of medicine for particular disease. Methods of using fish extract were found more or less similar in all traditional fish based ethnomedicines treatment in the study area.

As no dose of medicine has been ascertained scientifically, the effectiveness of the fish extract used for the treatment of the various diseases depend on the amount used whatever may be the case. Fish based ethnomedicine practitioners were found having traditional aged methods of using raw medicines in the treatment

It is one of the important aspects of the self-dependent techniques which helps preserve traditional treatment technique developed by human beings through ages to cure ailments. The ethnomedicine practitioners have inherited original knowledge passed from generation to generation. In fact, that is the basic idea for exploring new ones. Fish based ethnomedicine

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