

STUDY ON PRACTICES/KNOWLEDGE AND RECEPIES OF  
TRADITIONAL HEALERS FOR  
TREATMENT OF JAUNDICE IN KATHMANDU VALLEY



**Principle Investigator**

Dr Rishi Ram Koirala, MD (Ayu.)

*Consultant Physician*

Naradevi Ayurveda Chikitsalaya Vikas Samiti

Hospital Complex, Nardevi

Kathmandu, Nepal

**Co-Investigator**

Bhupendra Nirajan Khaniya

August 2003

## ACKNOWLEDGEMENT

---

We are grateful to Nepal Health Research Council (**NHRC**) for providing grant to carry out the research work. We would like to extend our heartfelt thanks to all the staffs of this organization for their valuable support and suggestion during the research. Help extended in providing books and literature and also computer, email, Internet facilities by NHRC- library are also gratefully acknowledged.

Valuable suggestion and kind support by the participants are also remarkable for the success of this research. We are very thankful to their contribution.

Finally, we are grateful to **Ayurveda Health Home (Nepal-German Joint Venture) Pvt. Ltd**, Dhapasi for the support to study literature available in library, and also Dr Sumana Thasineku (B.A.M.S.) for her remarkable assistance to conduct interview and questionnaires filling with traditional healers during field visit.

**Thank you**

Dr RR Koirala

PI

Bhupendra Nirajan

Co-PI

## PREFACE

---

Research into the traditional knowledge and remedies and herbal resources is so complicated especially in developing countries like Nepal. Without adequate financial as well as technical support from national and international concerned agencies and clear cut policy and planning of the nation, research into indigenous knowledge is almost unfeasible.

Worldwide demand of natural drugs and attraction of world's elite groups toward traditional medicine as alternative medicine has proved good potentialities of traditional medicine. Indigenous medical knowledge in Nepal is cultural based, century-old and it has been running from generation to generation since time immemorial.

We do hope; this research on traditional knowledge, technology and recipes of traditional healers of Kathmandu Valley to treat jaundice may add a small stone in the foundation of research in this field. Due to the time and budgetary restriction, we were compelled to limit the number of healers, patients and focused on only a particular disease.

We are sure that this research has shown wide potentialities of research in indigenous medical knowledge in country context. It may helpful to students, academicians and researchers in Ayurvedic as well as sociological/ anthropological research. Besides this, it may provide support to national policy makers and planners, and also concerned agencies to develop research activities in this sector.

Reader's comments and valuable suggestions are always welcome to us. Please do contact us in following address without hesitation and feel free for any inquiry.

**Thank you**

Ayurveda Health Home Pvt Ltd

*(Nepal- German joint venture)*

Website- [www.ayurveda.com.np](http://www.ayurveda.com.np)

Email- [info@ayurveda.com.np](mailto:info@ayurveda.com.np)

POB NO.- 2869, Phone- 4 358 761

Dhapasi, Tilingtar, Kathmandu



# CONTENTS

---

Chapter	Page no.
Executive summery	01- 02
Introduction	03- 04
Methodology	05- 06
Literature review	07- 13
My Observation	14- 19
Finding	20- 25
Discussion	25- 27
Recommendations	28- 31
Reference	32- 33
Annexes	34- 54
Questionnaires for Healers	
Questionnaires for patients	
List of Traditional healers	
List of medical herbs used in jaundice	
Glossary of Ayurvedic terms used in report	
Photos	55- 60

Chapter: 1

## EXECUTIVE SUMMARY

Criteria for sample selection were simple - age, experience and profession of the healers. Emphasis was given to the varieties of method of treatment rather than the number of traditional healers for the research. So, only twenty traditional healers renowned in Kathmandu, Lalitpur and Bhaktapur districts were selected and made discussion in detail directly with them regarding the disease.

Questionnaires and interview were used as data collection tools. No secondary data were used. Questions in the questionnaires and the interviewed- questions were similar. There were nearly 40 questions for healers and 25 questions for patients. The reason in making such long questionnaires is to make clear about the family as well as individual background of the healers, his knowledge, experience, attitude, expectation etc besides particular knowledge in jaundice.

The purpose, scope, methods, benefit and approximate time of engagement, also the use of study, related institutions and organization to this research etc were informed very politely to the participants. Personal introduction of researchers, objective, rationale of research were also described as they put interest. Participants chose whether s/he wanted to fill questionnaires himself/ herself or easy to him/her to ask by researcher then proceeded.

An additional chapter - My Observation, is included to highlight experience and personal observation of investigators with traditional healers during the field visit. Literature review provides to some extent brief knowledge on hepatitis disorders according to Ayurveda. This is the chapter compiled from published books, articles and research report during the literature review. It highlights

much information about the diseases in Ayurvedic concept and could be useful to the students, other academic readers as well as researchers for further research in future.

Majority of traditional healers hesitate to talk over the knowledge of healing with other people and never transfer their knowledge to other except within their own family member. The research found two major reasons.

- First, it is their profession and only the source of income; it means traditional knowledge is the healer's personal wealth, and they scare from being piracy.
- And second, they proud as healers and don't want to loose their prestige and status in the society, producing similar profession. So, it is being limited within the family.

The research found four different methods (process means the mechanism how the used herbs work to cure jaundice used by the traditional healers) of treatment of jaundice by the healers.

- Oral application of drugs- results vomiting
- Oral application of drugs- results diarrhea
- Using drugs (in the form of paste) at naval periphery
- Using through the nasal passage (drug in liquid state)- results nasal discharge
- Sweating
- Stimulate and liver

This research finally suggested to concerned institutions and organization of the state for two major and very urgent processes.



- Identification of actual and capable traditional medical practitioners i.e. traditional healers and provide legal permission i.e. license to practice
- Capture the knowledge for preservation promotion development and utilization before they fade out.

There seem two big difficulties for identification of actual healers and their ability.

- Development of criteria how to identify a healers and how to measure his knowledge to treat what kind of diseases
- How to capture of knowledge if some one has effective traditional knowledge that can contribute in health service but he cannot be included in the list of traditional healers.

## INTRODUCTION

*This chapter highlights background, objective and limitation of the research*

### **Background**

Kamala is the commonest problem in our countries, particularly in Kathmandu Valley. During the rainy season it appears as an endemic disease with variable clinical conditions. The patient may have simple effects or a very serious situation including life threatening or even death.

Traditional healers in Kathmandu Valley treat a wide variety of conditions. They are especially renowned for their ability to cure jaundice and other common ailments. Most resident of Kathmandu, even those who do not usually seek Ayurvedic treatment, will consult a traditional healers when, during the course an illness, they or family members become jaundiced. Approximately one third of the visits to the traditional healers in the city are for jaundice.

Excepting some sociological and anthropological study on traditional healers and knowledge, there has not been conducting adequate research on traditional medical knowledge by Nepalese researchers, scientists and students to capture and document the core and applicable knowledge of traditional healers and practitioners in order to preserve and further research in future. This research was designed to find the applicable and practically successful knowledge of local healers for treatment of particular disease- jaundice.

### **Objective of the study**

Concise summary of the objectives of the research are to

- identify the traditional healers, who are practicing traditional medical knowledge and have excellent knowledge of treating jaundice

- identify the method of treatment and usefulness of herbs to cure jaundice

### **Research Questions**

- How does a traditional healer having no academic background identify jaundice?
- What are the medicinal herbs used for jaundice and the physical state of the drugs?
- How do the drugs work and react in the body to treat jaundice (in the healer's words)?

### **Limitation of the study**

This study was limited within the Kathmandu valley. Duration of the research was just five months to be completed. Adequate literature and previous research findings in country context were not available easily. It was conducted within a small budget. Only 20 healers and 100 patients were selected for questionnaires and interviews.

## METHODOLOGY

*This chapter highlights the design of the study, data collection techniques and tools, sampling, field approaches and data management and ethical consideration etc*

- **Study Design**

Questionnaires and interview were used as data collection tools. No secondary data were used. Questions in the questionnaires and the interview-questions are similar. There were nearly 40 questions for healers and 25 questions for patients. The reason in making such long questionnaires to make clear about the family as well as individual background of the healers, his knowledge, experience, attitude, expectation etc.

- **Sampling and selection**

A survey study was conducted around the valley to know the famous healers. Most of the healers were found through the patients. Only 20 healers were being selected based on following criteria-

- at least 50 years in age
- having experience of more than twenty years
- accepted traditional medical practices as profession
- at least three consecutive generation following family tradition as healer
- having no academic background (in TM)
- specialty (method of using drug or treatment procedure)

Some of healers were being selected although they are not actually professional healers and practicing only as side job (see chapter- my observation). It is because of their effective and very successful method of treatment and action of used drugs. It was ignored how they got the knowledge and preference was given how the drugs work in some cases.

Similarly, there were some specific criteria for the patient to be selected in the research as follow

- Jaundice patient who was currently taking treatment from any traditional healer, or
- Who has just recovered from the diseases taking treatment from any traditional healer

- **Field operation**

The co-investigator with a field assistant visited the home/ clinic of selected healers and patients and conducted questionnaires filling or interview.

- **Data management**

Filled questionnaires or interview- sheet were collected by the co-investigator and filed safely. Then all the data were put into computer soon.

- **Ethical consideration**

The purpose, scope, methods, benefit and approximate time of engagement, also the use of study, related institutions and organization to this research etc were informed very politely to the participants. Personal introduction of researchers, objective, rationale of research were also described as they put interest. Participants chose whether s/he wanted to fill questionnaires himself/ herself or easy to him/her to ask by researcher then proceeded.

## Chapter- 4

### LITERATURE REVIEW

*This is the chapter compiled from published books, articles and research report during the literature review. It highlights much information about the diseases and could be useful to the students, other academic readers as well as researchers for further research in future.*

The liver plays central role in maintenance of metabolic homeostasis. It is known as a storehouse of energy. Liver is the seat of *Pitta* (metabolic activities). The subtle enzymes, the *bhuta agnis* are located in the liver. They transform digested food (fluids or particles) into the form of the five proto-elements needed to build up, nourishment to the *dhatu*s organs in the body. It is therefore not surprising that the development of clinically important liver disease is accompanied by diverse manifestation of disordered metabolism. One of such disorder that is characteristics of the liver dysfunction is hepatitis (*Yakrita sotha*). Most of the liver disorders like jaundice and hepatitis are typical aggregated *pitta* condition either by endogenous imbalance, or obstruction of *pitta* circulation, noxious toxins, foods or drugs toxicity or by infections virus or other agents. *Pitta* literally means the thermal energy, metabolic fire. Bile is also one form of *pitta* and excessive bile production or congestion in flow of bile usually indicates high *pitta*.

Jaundice is characterized by the appearance of yellowness in the eyes and skin. This condition has been mentioned as a symptom or as a disease in Ayurveda. In Ayurveda it is called *kamala*, which is caused by excessive circulation of *pitta* in blood. Liver is the seat of *Pitta* and easily heats up, causing various inflammatory diseases. If there is any obstruction (*Ruddhapatha kamala*) in the bile circulation, or impairment of the function of the liver, or excessive destruction of the red blood

cells, or anemia, or noxious destruction of liver cells, then the excess pitta dosa travels through the transportation channels (Srotas) and produces Kamala which affects different tissues. Its symptoms include deep yellow eyes, urine, skin, nails, mouth and feces (yellow or clay colored); burning, impaired appetite, indigestion, thirst, greenish-brown complexion, fever, generalized weakness, or may develop severe conditions like *Kumbha kamala*, *Ghtyantra kamala*, *Jatodaka kamala* or others.

In most of the fiery emotional residue effects to the liver, excess emotions, irritability, jealous, anger and ambition; accumulates pitta or vice versa. So, stress is also one of the important cause of the development of Jaundice. Balanced emotions and pitta provides courage, confidence, enthusiasm, and will power.

### **General care of liver and use of local herbs in Ayurveda**

There are many goods, generally bitter, herbs for promoting the flow of bile, cleansing the blood, detoxifying the liver and thereby relieving high pitta.

Turmeric and Barberry in equal parts are very good for cleansing liver energy and preventing emotional stagnation. Aloe gel is an excellent liver tonic, taken 2-3 tea-spoon-full 2-3 times a day. It has both cleansing and building properties.

Mild spices, such as coriander, fennel, cumin, turmeric, Cyperus, mint, leman and lemma help promote liver energy and improve appetite in sluggish and congested condition of liver. Many green herbs- nettle, chickweed, comfrey are good for cleansing the liver; chlorophyll in general is good for this purpose.

An effective herbal formula is often made up of several components. Each part has a specific function or action type. Here are some specific formula

components that have proven effective through scientific studies and clinical experiences.

### **The most important herbs used in the Ayurvedic drugs**

- **Bhringraj**

This plant is found throughout the country. The whole plant and sometimes only root or leaves are also used preparing infusion, decoction or powder

This plant stimulates the flow of bile into the intestine. The root is used as emetic and purgative. The liver juice is used as a liver tonic. It is rejuvenative for pitta, for kidney and liver. The root powder is used in Ayurveda for hepatitis, enlarged spleen and skin disorder.

Bhringaraj inhibits toxic metabolite generation and restores hepatic acid phosphate enzymes<sup>1</sup>.

It reverses free radical mediated inhibition of anti-oxidant enzyme. (Reverses free radical mediated inhibition of anti-oxidant enzyme)<sup>2</sup>

- **Bhuamyamalaki**

This plant is easily available in tropical and subtropical region of Nepal. The whole plant is used therapeutically. Researches have shown that this plant primarily acts on liver. This plant has been used in Ayurveda for over 2000 years and has a wide numbers of traditional uses. It is the main herbs for treating any kinds if liver disorders. It is frequently used in jaundice, gonorrhoea, frequent menstruation, diabetes, skin ulcers, sores, swelling, chronic dysentery etc.

---

<sup>1</sup> J. Ethnopharmacol. (Ireland), 40(3), 193,Dec., 155-61

<sup>2</sup> Pharmacol. Commun.5, 1999, 455-461)



With P niruri, 59% of treated patients lost HbsAg after the treatment as compared to only 4% controls. In no case, the surface antigen returned up to nine months. Clinical observations revealed on toxic effects. In carrier patients positive for HBsAg but negative for HBeAg, 93% cleared the carrier stage. In HBsAg & HBeAg positive carrier but negative for anti HBC IgM, 44% patients were cleared. In treated carriers positive for HBsAg, anti HBC IgM but negative for HbeAg, 67% lost the carrier stage. The mode of mechanism suggested is by inhibiting the reaction between HBsAg (surface antigen of HBV) & the antibody (anti HBsAg) and by inhibiting the endogenous DNA polymerase of HBV, woodchuck & duck Hepatitis virus. (Effect of Bhuiamala (P. niruri) on chronic carrier of hepatitis B virus - The Lancet, 1988, Oct., pp 764-766)

Ayurvedic drugs are made in the form of infusion, juice, poultice, powder, or pill. No adverse effect has been reported by using this plant till now.

P. niruri exerts hepatoprotective effect against drugs, chemicals, paracetamol and country made liquor, probably due to counteracting the inhibition of cytochrome p450 & decreasing glutathione depletion thereby, causing quicker elimination of toxicants from body fluids (Quicker elimination of toxicants from body fluids - Ind. J. Exp.Biol. 33(44), 1995, 261-268). It reduces Fatty Liver changes (Ind.Drugs.30 (7), 1993, 338-341).

- **Guduchi**

This is the plant which also known as nectar of immortal. This plant is easily available in tropical to Himalayan range of the country. The whole, preferably the stem is used as medicine mostly in the form of powder.

This plant is used to treat immune diseases and pitta diseases. It is used as blood purifier and also used in fever. It plays vital role in treating jaundice, indigestion, constipation, and dysentery and also for cancer and AIDS.

Study shows that it reduces fatty liver changes (**Reduces Fatty Liver Ind. Drugs. 30(7),1993, 338-341**). Prevents fibrotic changes, modulating Kupffer cell activity in experimented model (**Prevents fibrotic changes, modulating Kupffer cell activity J. Postgrad. Med. 40 (2) 1994**). This along with other herbs exert anti inflammatory action B androgenic blockade and found to modulate immunosuppression in dose dependent inhibitory effects, significantly exerting antiinflammatory activity. (**Alters cell surface biology & modulates immunosuppression (Ind j. of Physiol. & Pharmacol. 33 (1), 1989, 28-30; Ind J. of Phamacol.2,1970,pg.26)** . This increases humoral and cell mediated immunity ( **Increases humoral and cell mediated immunity (J. Ethnopharmacol., (58), 1997, 89-95)**

This has been found to reduce mortality, improving phagocytosis & intracellular bacteriocidal capability of neutrophils. (**Reduces mortality, improving phagocytosis & intracellular bacteriocidal capability of neutrophils (J.Potgrad Med.(India), 38(1), 1992, Jan-Mar,p 13-15; Ind.J.Med.Res., 90,Dec.1989, Pg.478-483)**

This plant improves cellular immune functions, and deranged serum parameters. (**Plant improves cellular immune functions, and deranged serum parameters Ind. J. Med. Res., 90, Dec. 1989, 478-483)**

- **Haritaki**

This plant is grows in temperate region of Nepal. The fruits are used in powdered, paste, decoction and gargle form. This is one if the important medicinal plants that has many uses.

This plant is used to treat jaundice. Besides jaundice, it is also highly used in colic, anemia, cough, asthma, vomiting, diarrhea, abdominal distention,

fevers, parasitic infection etc. It cannot be used for pregnant, somebody suffering from dehydration, and severe exhaustion.

Study shows that Haritaki with Rheum sps. poses potential antiviral effects. **(Phytotherapy Res. Vol.11, 1997pg 197-182, Glossary of Ind.Med.Plants/ the Wealth of India, Pub. of C.S.I.R, Govt. of India, New Delhi)**

- **Kalmegha**

This plant is found in southern part of Nepal. The leaves are used as medicine and used in the form of infusion, decoction and powder. This plant is bitter, acrid, and cooling in action and highly useful in treating jaundice and other hepatic disorders. It is also used as laxative, inflammatory, expectorant, and digestive. It is used in treating burning,, sensation, wounds, ulcers, chronic bronchitis, diarrhea etc.

The study has shown that the plant is effective to counteract inhibitory response of hepatotoxic drugs on bile. **(Counteract inhibitory response of hepatotoxic drugs on bile Planta Medica (Germany), 1992,58(2) 146-149)**

Also it significantly reduces enzymatic leakage of SGPT and Alkaline phosphatase, and acts as an anti-oxidant. **(Significantly reduces enzymatic leakage of SGPT and Alkaline phosphatase, acting as anti-oxidant (Bio. Chem. Pharmacol. (England), 46(1), 1993, July 6, 82-85; Phytotherapy Res.Vol.15 (5), 2001)**

- **Katuka**

The dried rhizome of katuka is used with equal parts of licorice and raisins to treat constipation. It is also used with neem barks for bilious fever and aromatics to treat fevers, malaria, and worms in children.

The reports are proving that this plant been found promising anti-HBsAg like activity & HbeAg & HBsAg inhibiting activities. **(Promising anti-HBsAg like**

**activity & HbeAg & HBsAg inhibiting activities observed Ind. J. Med. Res. (B) 92, April 1990, pp133-138).** The study results are suggesting that the plant has choleric, cholagogue & cytoprotective action on hepatocytes against viral toxins thus helping in regeneration of hepatocytes. **(Faster Clinical & Biochemical Recovery in Viral Hepatitis J. Res. Edu. Ind. Med. Oct.-Dec. 1991 pp35-39)**

Another study proves the hepatoprotective effects of this plant. The product Picroliv, the irridoid glucoside mixture from Katuka shows anti-hepatotoxic action which seems likely due to an alteration in the biotransformation of the toxic substance like anti-tubercular drug, paracetamol and alcohol etc. resulting in decreased formation of reactive metabolites under a dose comparable study, it showed better hepatoprotection than silymarin. **(Reduces formation of toxic metabolites. J. Ethnopharmacol. (Switzerland) 34 (1), Aug. 1991, 61-68)** There are number of studies carried out on this plant having promising effect on diverse clinical conditions of liver disease, including the reverse the liver enzymes normalcy in case of toxicant induced alterations. **(Reverses Toxicant induced alteration. Phytotherapy Research, vol.5, 1991,115-119)**

It regenerates hepatocytes by stimulating protein & nucleic acid synthesis in liver cells. **(Pharmacol. Res. England, 23 (4), 1991, 399-407; Ind. J. Expt. Biol. Vol.30, Jan.92, pp68-69)**

- **Musta**

This plant is easily available in tropical to temperate region of the country. The decoction or powder of rhizome is used to treat poor appetite, diarrhea, dysentery, fevers, indigestion, liver, spleen, and pancreas and to treat malabsorption. It may cause sometimes constipation and excess vayu.

- **Sharapunkha (Tephrosia purpurea)**

In intoxicated subjects, Sharapunkha resulted in significant protection against increase in serum bilirubin, SGPT, SGOT, & checked the central or submissive

necrosis in hepatocytes, suggesting its restorative role on liver biochemicals due to membrane stabilizing effects on hepatic cells. **(Exerts membrane stabilizing effects on hepatic cells, restoring LFTs preventing histopathological changes- Ind. J. of Pharmacol., 25,1993, 34-36)**

- **Pippali**

The fruits of this plant in the form of powder, infusion or oil is used too treat abdominal tumors and distention, and to improve the digestive fire. It is used to treat gout, sciatica, laryngitis, paralysis and worms. It is also used to enhance the immune system.

- **Punarnava**

Punrnava is also easily available in wild. The root or whole plant can be used in various forms such as – juice, decoction, infusion, powder, paste, and oil with water, sugar or honey. The root infusion or decoction is used in constipation. And, leaf juice is very useful in treatment of jaundice. It induces vomiting in large dosage. Treatment with Punarnava (*Boerhaavia diffusa*) alongwith alcohol, showed a significant fall in serum ALT, triglycerides, cholesterol & lipids. **( Screening of Bhuiamala & Punernava on alcohol induced liver cell damage (Ind. J. Pharmacol. 18 (1986), 211-214; 23(1991), 264-266)**

Luffa echinasa

The dry fruit is soaked on water and few drops instilled on both nostrils. This drop stimulates nasal mucosa and increases continuous yellowish nasal secretion lasts for two to three days.

**Some other important herbs, minerals, rasas, ghrita and rasayana used in diverse liver conditions.**

- **Herbs**

*Aloe vera, Andrographis paniculata, Cicorium itybus, Eclippta alba, Phyllanthus niruri, Picrorrhiza kurroa, Piper longum, Tephrosia purpurea, Terminalia bellirica, Terminalia chebula, Tinospora cordifolia, Vitex negundo, Emblica officinale, Zingiber officinale, Alangium salvifollum, Achyranthes aspera, Calotropis procera, Cytrullus colocynthis, Luffa echinata, Opperculina turperthum, Ballosperrum montanum, Leucas cephalotes, Azadirachta indica, Piper longum, Aegle marmelos, Phyllanthus niruri, Cyperus rotundus, Brassica juncea, Embelia ribes, Curcuma longa*

- **Mineral and Rasas**

Arogyavardini rasa, Kamalihara rasa, Punarnava mandoora, Silajitu, Swarnamalini, asantha, Tapyadi lauha

- **Ghritha and Rasayana**

Bramha rasayana, Indukantha ghritha, Pancha tiktha

- **Mechanism of action**

1. Hepatoprotective- eg *Andrographis paniculata*
2. Antiviral- eg *Rheum emodi*, *Terminalia chebula*
3. Choleric activities- eg *Arogyavardini* , *Picrorrhiza kurroa*, *Zingiber officinale*
4. Regeneration of hepatocytes- eg *Picrorrhiza kurroa*, *Andrographis paniculata*, *Tephrosia purpurea*
5. Antifibrotic activities-
  - Chronic inflammation: *Eclipta alba*, *Piper longum*
  - Antioxidant: *Picrorrhiza kurroa*
  - Immunomodulatory: *Tinospora cordifolia*
6. Miscellaneous
  - Appetite stimulants: *Andrographis paniculata*, *Phyllanthus niruri*
  - Laxatives: *Kumari*, *triphala*

- Dialysing action: Nasal- *Leucas cephalotes*, *Luffa echinata*; Ocular-washnut

### **Clinical research in Ayurvedic drugs and herbs**

A clinical evaluation of a traditional herbal compound- Jaundicatin (a clinical research conducted by Dr RR Koirala and Dr Shesh raj Achary) reported that the compound was found effective in liver function.

In recent years, specially in India and other countries, several researches have been made in *Phyllanthus niruri*, one of the herbs highly used in preparation of herbal remedy to cure jaundice. *Phyllanthus niruri* is a well-known household remedy throughout India for the treatment of jaundice. In vitro and in vivo studies on the antiviral activities of the plant extract against hepatitis B virus are in progress in India and elsewhere. In vitro inactivation of this plant of HbsAg by the plant was reported from India in 1982. In vitro studies carried out in US have shown that the plant inhibits endogenous DNA polymerase of Hepatitis B virus and binds to the surface antigen of Hepatitis B virus DNA polymerase in vitro.

The plant grows abundantly in south India and can be easily introduced as a remedy for non-surgical jaundice at the primary health care level.

Similarly, the chronic type of damage induced by CCl<sub>4</sub> was prevented by (+) cyanidanol, the active principle of the *Acacia catechu*. The aqueous leaf extract (0.5g/kg p.o. x 6 days) of *Andrographis paniculata* showed a significant hepatoprotective activities in CCl<sub>4</sub> induced hepatotoxicity in rabbits as indicated by a reduction of serum aspartate amino-transferase and alanine amino-transferase and the histopathological examination of liver tissue. In a pilot study, two well

known medicinal plants *Eclipta alba* and *Phyllanthus niruri* inactivated hepatitis surface B antigen in vitro.

*Luffa echinata* fruit juice administered as nasal drops to patients of viral hepatitis led to a reduction in serum bilirubin and SGPT, along with substantial relief in clinical symptoms like anorexia and malaise. The 50% ethanolic extract of roots and leaves of the plants *Phyllanthus niruri* had hepatoprotective effects on alcohol-induced liver damage on nonhepatectomized liver and partially hepatectomized rats. Ethanolic extract of the rhizomes of *Picrorrhiza kurroa* exhibits potent hepatoprotective activity in rats and *Mastomys*. The active principle was identified as an iridoid glycoside mixture, kutkin. The dry fruit powder of *Piper longum* had no effect against the acute damage nor against the cirrhotic changes induced by CCl<sub>4</sub>.

The acute type of liver damage was not prevented by *Tinospora cordifolia* but the chronic type was prevented the fibrous changes and promoted regeneration of parenchymal tissues. Alcoholic extract of the leaves of *Withania somnifera* possessed a hepatoprotective effects against CCl<sub>4</sub> induced toxicity in mice and was equivalent to 10mg/kg of hydrocortisone.

Chapter: 5

## MY OBSERVATION

*This is an additional chapter highlights experience and feelings based on observation of Research Co-Investigator with Traditional Healers during field visit*

1. **Mr. Krishna Bahadur Manandhar** (66/M), Ramkot-5, Dandapauwa



He enjoys chanting Bhajan with his group so popularly known as Bhajan Gaune Krishna Dai in his locality. He claims himself, as an expert for jaundice, gastric and ganu-gola, doesn't treat for other disorders.

He was suffered by jaundice at his 7 years age. About 59 years ago, a man was going to Manakamana Temple of Gorkha district crossing his village. The man suddenly fell in field near his home. He was suffering from fever. Manandhar's father was also traditional healer and had good experience of treating fever. He treated the man and he immediately recovered within short time. Surprisingly, the man was also a healer. He has very good knowledge of treating jaundice. Then the man and Manandahr's father exchanged their knowledge. Mr Manandhar came to know the knowledge when he was 7 years old. He began to support his father at his childhood. Now his wife is helping for him but doesn't sure whether his son would do continue it or not.

## 2. **Mrs Makhan Dhungana**, 75/F, Tahachal

Mrs Makhan asked me how long I had been suffering from jaundice when I met her. As I understood she has effective herbal drugs for jaundice but she doesn't know how to diagnosis disease. She just uses the herbal drugs if somebody comes to her and says him/herself that s/he has been suffering from jaundice. Her husband was famous for this. After her husband's death, she has been continuing what she learnt from him. Professionally she isn't healer, but cannot say "no" when people come.

She tried to escape when I asked some questions regarding her way of treatment, drugs and knowledge. She refused to reply how she collect the herbs, prepare and use, even she didn't permit me to take her photos. Probably she thought I was from government office and scared from legal problems.

It cannot be said whether she has good knowledge and experiences about the disease, but her drug must be effective. Her drug works within few minutes and very rarely need second dose. She is also one of the famous practitioners in the city.

### 3. **Mr Baikuntha Ranjit**, 52/M, Swayambhu

A graduated businessman, Mr Ranjit is also famous for his treatment. He is very soft and frank, is famous for his wonderful and effective drugs for jaundice. He can also treat gano-gola and sinuses. He got the knowledge of healing various diseases from his father but not so interested on it in past. However, he has established it as his side-job when the people believe on his knowledge and his herbal drug. Then he started self-study regarding liver, its functions, problems and herbal treatment etc. So he can explain many things about the disease including Hepatitis during treatment to his patient.

He refused to reply any question when I asked about the herbs that he used. As he said, he uses a singular plant, and rarely mixes two or three. He didn't make clear condition of using single herbs and mixtures. It is interesting to know that sometime he uses it through nose or sometimes orally. And, sometimes uses in both ways for same patient. It was difficult to understand how he decides to use the same drug in different way. I saw the drug in liquid state and was rice-water-colored with foam on surface when a patient was taking it.

As he said, the useful herbs are only available in dense forest of Terai region. He did try to cultivate in his garden but could not get success. He personally orders to the local herb-collectors for the herbs, but the collector doesn't know how he is using.

### 4. **Mr Piyush Bajra Bajracharya**, 52/M, Patan

He has graduated in science but practicing traditional knowledge what he learnt from his previous generation. We can see more than 30 people, sometime more than 40, with him in his clinic waiting his treatment. As he said people come with various kind of problems and almost of them become happy after treatment.

Most of people come to him when they cannot get successful treatment from modern hospitals. But, in case of jaundice, everybody remembers and believes traditional and natural drugs. So, sometimes, more than fifty percent patients coming to him are jaundice patients in summer season, he said.

After his simple diagnosis, he gives drugs for five days, which he prepares himself. Unlike other healers, he can tell about the ingredients of the drugs if someone wants to know.

As he said, he is now studying classical manuscripts to search anti-cancer medicinal herbs and minerals for his research. He is gentle, polite, soft and open to his patients. Personally, I believe, he has excellence knowledge and good experience. His knowledge, experience, opinion, attitude towards TM can help to follow research in traditional knowledge. He is not satisfy with the government's policy and planning, especially so aggressive to new rules and regulation of Nepal Ayurvedic Medical Council for registration of traditional healers into the council.

#### 5. **Narayan Gopal Vaidya**, 66/M, Inacho, Lalitpur

I was so impressed when I was talking with Mr Narayan Gopal regarding his traditional knowledge. He is so kind, helpful, soft, open and experienced, probably it is his profession continuing from 6-7<sup>th</sup> generation. He has been producing some Ayurvedic drugs and supplying to other healers, local Jhar-

Phuke Vaidya and retailers. We can see various natural products traditionally made by him including Chyavanprasa.

He can treat many kinds of diseases but do not treat if the condition of patients is serious.

**6. Bhuwan Raj Shakya, 61/M, Chyasal, Lalitpur**

Traditional healer is the family profession of Bhuwan Shakya, but he has no interest on it these days since modern medicine has been humiliating such healers, in his words. He has small domestic factory producing various Ayurvedic drugs and supplying to the local markets. As he said, it is hard to compete with Indian products, which looks attractive than ours and people prefer looking (container, label, and ad. etc) despite the quality.

More than thirty types of local herbs are in used in his factory for different 7-8 Recommendations natural products for asthma, cough and cold, skin diseases, wound in mouth, digestive problems, blood purifier etc.

**7. Mukta Raj Bajracharya, 85/M, Patan**

This 85 years old man is famous in his locality for various psychological treatments suffering by bad-spirit caused by Bhut-Pret, Boksi etc. He didn't say openly, but as I understood, he used to treat all kinds of diseases in past. But these days, he has limited his practice since people have less believe in traditional medicine and prefers to go to modern doctors. He is also a fortune-teller. I personally paid twenty rupees and request to tell about my future. Current years are not good but time after 36 years age are very good in my life, according to him.

He has lots of locally made traditional medicine for jaundice, gano-gola, gastric, sinuses etc. Because of old age, he cannot prepare drugs himself so purchase from local producers.

**8. Narayan Khatri, 68/M, Bhaktapur**

Many people, even from remote area of country come to him for treatment of Bhut-pret and Bokshi. He has wonderful procedure of treatment. He uses 3 chicken eggs and shows whatever the problems inside the patient due to bhut-pret and boksi. I haven't seen myself, but people say (who are taking treatment with him), they can see various kinds of materials like needles, clothes, wooden pieces etc when the eggs are broken after his tantra-mantra and they feel relief forever.

If people suffering from jaundice go to him, he prepares Ayurvedic drugs using local herbs and gives. Most of the people suffering from psychological disorders (due to bhut prêt etc in their believe) prefer to come to him from treatment.

**9. Saptaman Vaidya, 61/M**

I was so impressed when I was talking with Mr Saptaman Vaidya regarding his traditional knowledge. He is so kind, helpful, soft, open and has experience. It is his profession continuing from 6-7<sup>th</sup> generation. His knowledge in traditional medicine and herbal drugs could be wonderful wealth not only for him, also for the nation.

**10. Purna Bahadur Lama, 53/M, Suryavinayak**

I saw a big signboard (see photo in next chapter) in front of his door and I wondered on reading the name list of diseases that are possible to treat by him written there. As he said, he has adequate knowledge to treat more than 20 different types of common diseases including jaundice and provides required

drugs himself. He collects some of medicinal herbs from Kathmandu Valley but most of herbs are being collected from Sindhupalchok District.

It was difficult to understand whether he has real knowledge and practicing successfully or quacking unnecessarily. All those things that he told were extremely unbelievable for me (like- an women can make a child whatever she desires- son or daughter, if she follows his treatment). But it doesn't mean that he is false and I can prove.

Regarding jaundice and other common ailments, he might have good knowledge. Useful parts of valuable medicinal herbs collected from high altitude are there with him at the time of interview.

## FINDING OF THE RESEARCH

*This is the chapter describes the result and finding of research abstracted from the questionnaires and interview with healers and patients.*

### General

- Traditional healers continuing their practice from generation to generation as family profession were found able to treat majority of diseases, and they prepare varieties of Ayurvedic drugs themselves. But those who have no long history as traditional healers are just treating only jaundice don't have adequate knowledge on other disorders. It is necessary to mention here that either of them, whether they have long history as family profession or not, their knowledge to treat jaundice was found successful.
- It was found in Lalitpur that some of renowned traditional healers have limited their activities as Jhar-Phuke Vaidya (to relief people who are believed suffering Bhut- Prêt Boksi etc). It is because of pressure of modern allopathic medical system, people are willing to visit modern doctors rather than traditional healers.
- Family tradition and respect, business as source of income and lack of other alternatives are major reason why the traditional healers are continuing their practice even there is no interest. Traditionally they are closely attached with it but under the pressure of modern science even in their family nobody wants to follow this profession, so almost all traditional healers are sure that, this country will loss such valuable knowledge after soon if the situation remains stagnant. However, it was found that those who have academic background (in other field) and

understood the world's changed scenario and future of traditional medicine are commercializing and getting success to great extent in the center of city.

- Majority of healers don't charge consultancy fee. And the cost of medicine is also reasonable. But, those who are commercially established in the center of city are not cheap. It was found that the cost of treatment ranges from below five hundred rupee (sometimes just one hundred) to above two thousand depending up on the condition of patient and status of healer. Not for all diseases, but for some diseases like jaundice, asthma, joint pain, stomachache, gastric, gano-gola etc, people's belief and attitude on traditional medicine is positive, according to the practitioners and patients participated in the research.
- Establishment of Nepal Ayurvedic Medical Council, criteria of registration into the council, nation's law, rules and regulations, Act to collect raw herbs from the wild state and to practice traditional medicine, trade of herbal drugs etc are still unknown to the majority of healers. Those who know to some extent are against the rules and regulation of council and criteria of registration into the council (at least 50 years age and 3 consequence generation of practicing). Government support for development and preservation of traditional medicine is "not clear" to them and "cannot say", according to them.
- It was found that people respect traditional healers but they prefer to visit modern hospital whatever the problem is. However jaundice is only one such disease for which, people remember traditional healers or Ayurvedic Hospitals of around them. According to some of patients participated in interview (questionnaire), allopathic doctors also suggest to visit



Ayurvedic Hospitals or traditional healers for treatment of jaundice. Or, allopathic doctors also prescribe Ayurvedic drugs.

- It is interesting to know that patient never ask about the composition of drugs that given to them. Sometimes healers get angry and humiliate if questions rise about the quality and herbal ingredients of the drugs. So, people stop visiting to them if they doubt the knowledge and seek another but never ask.
- If allopathic medicines fail to improve health condition then traditional healers come into memory. People with the problems of joint pain, gastric, ulcer, stomachache, asthma etc and some of with sexual problems since long time and using allopathic medicine were seen in home-yard of healers waiting his suggestion. It was found that these-day, people prefer traditional healers and natural drugs for those kinds of health problems.
- There are mainly four reasons why people go to traditional healers as the researchers found.
  - First, because s/he believes in traditional treatment and Ayurvedic drugs prepared by the healers. It was found that elite groups of the valley, which has understood, visit healers for treatment looking at the condition and nature of problems. For treatment of disease like sinuses, jaundice, gastric, joint pain, stomachache, sexual problems (especially for impotence), people go to traditional healers and use natural products.
  - Second, if induced by somebody's experience and suggestion.
  - Third, if there is financial problem.

- And finally, if nothing has done (no satisfactory regime or solution found) for his/her health problems.
- Everybody realized that knowledge and technology that traditional healers are practicing should be preserved and need of scientific research. Traditional healers are ready to cooperate and work with any governmental and non-governmental research institute if the institutes promise to secure their authenticity on their knowledge and benefit sharing. The next generations are not supposed to succeed their profession, if nation cannot recognize importance traditional knowledge and don't step for its preservation and development, certainly this system will be faded away in near future, according to the practitioners.

#### Hepatitis disorder- jaundice

- Most of herbs used in jaundice treatment are available in market, but healers never inform to the patients. Some healers provide five-days dosage at once and add more if need. There are some healers who apply their drug to the patients themselves and patients have to visit everyday until the disease recovered. The reason is not other than fear of piracy of their knowledge. Majority of healers prepare the drug themselves and some of them buy from other. But, they don't prescribe ready-made drugs available in markets produced by national and international companies.
- Diagnosis process of diseases by healers is almost similar. They see eye, nail, tongue, and skin, feel pulse, and press stomach to find whether there is pain or not. Similarly, they ask about feeding, sleep, stool, urine and other behavior to find the problems of the patients. They never prescribed for test in modern lab but sometimes the patient him/herself wants to make sure and follow lab test whether the healer is right or not. In fact,

patients put forward their problems themselves then healer follow his way of treatment.

- It is confusion among the healers whether milk, salt, yogurt, and fruits like apple, banana, orange etc are good to have during treatment or not. Oily, sour, chilly, very hot, fried, dry, and heavy foods especially solid foods are suggested not have during treatment by all. Papaya, sugarcane, cucumber, and plenty of water and physical as well as mental rest are essential.
- Physical state of the drugs varies and depends up on application method. Drugs were in the form of tables or powder (oral use) or liquid (apply through nose or oral) or paste (apply at nasal periphery) depending on knowledge and practice of healers.
- It was also found that application in nasal periphery and nasal drops are more effective as both healers and patients said. Sometimes even a single dose is enough to cure the disease. And, within 5-10 days, the disease will be healed if drug apply at nasal periphery. The powder and tablets take more than 15 to 40 days to recover as the users said.
- It is necessary to mention here that no one knows/uses two different kinds of composition. Ingredients of drugs also vary from healer to healer. As we found singular plants (by Vaikunthha Ranjit) to composition of more than thirty medicinal herbs (by Piyush Bajra) are used in drugs. No chemicals and any kind of minerals are using for the drugs.
- The research found four different processes (process means the mechanism how the used herbs work to cure jaundice used by the traditional healers) of treatment of jaundice as following.

- Oral application of drugs- results vomiting stimulating liver pitta excretion
- Oral application of drugs- results diarrhea stimulating liver pitta excretion
- Using drugs (in the form of paste) at naval periphery- promotes liver functions
- Using through the nasal passage (drug in liquid state)- results nasal secretion
- Sweating

## DISCUSSION

During this process of field research we have come into following points where we need discussion.

1. Drug : its safety, efficacy and quality
2. Therapy application: good practicing, legal issues
3. IPR issues

### **Drug: its safety, efficacy and quality**

**Safety of the drug: most of these traditional are using plants either collected by themselves or others. The knowledge of the safety of drug is little known by them. If any complication comes normally patients do not visit them or they give some other explanation. But safety of drug is little known by their experience.**

### **Give some example**

- **Safety and efficacy of the drugs**

A 75 years old woman- Ms Makhan Dhungana is famous in Tahachal area for her drugs that she apply to treat jaundice through nasal passage. As she said, she had never used second dosage for the same patient; single dosage is enough to cure if the condition of the patient is not severe. Fee and the cost of the drugs are **nominal/reasonable.**

Here are some big problems with her practice. She has no idea how a disease is diagnosed, even for jaundice. She asks how long the visitor has been suffering from jaundice then she provides her drugs (everyone has to use there they cannot bring home). Besides this, she just suggests some dietary restriction. She cannot evaluate the condition of the patients. She doesn't care whether the patient is suffering from other diseases or not. We could not understand why she refused to talk with the researchers during the questionnaires filling and refused to give information of the herbs that she uses.

This is an example, which raises questions on safety of the drugs that traditional healers prepared and their services. Not majority, but some of healers who, introduce themselves as traditional healers without long history of family background, they don't have adequate knowledge on diagnosis and treatment of diseases. Such healers have effective knowledge of useful herbs for particular disease but no knowledge of background of diseases. So, they can treat only when patient him/herself says the problems.

Such healers are actually not traditional healers, but successful knowledge of drugs, which can contribute health sector. It is a problems how the nation defines the role of such semiskilled healers and captured the knowledge to protect being extinction as well as piracy.

- **Price and Quality of drugs**

**Dhirendra Gajurel** of **Sarlahi** said that he had visited five times to one of the renowned traditional healers in Mahabauddha to cure jaundice where he paid Rs 240/- per visit (Rs. 2000/- in total). In his words, it is not cheap to get treatment from traditional healers in Kathmandu who has commercialized their knowledge.

This example shows that traditional medicine practitioners in Kathmandu, who has understood the future of traditional medicine in developed countries, have commercially established in the town. Such established healers are to great extent expensive than others.

Those traditional healers who, produce various Ayurvedic drugs and trade in local markets for commercial purpose, the quality of drugs to some extent lower than that, which is produced only for patients, by the healers. It may be the

reason why some patients have to visit more than three-four times to the healers for same problems.

- **Preservation of knowledge and continuation of the profession**

**Saptaman Baidya** and his brother in Bhaktapur have been continuing their profession as traditional healers since 6-7 generation. Lots of people still come there for treatment of various types of common diseases. They are producing some Ayurvedic drugs including "**Chyavanprasa**" and trading in local market. But they are unhappy and not willing to continue the works for longer. It is because, majority of people visit modern doctors and doesn't believe the traditional knowledge in the name of science. Even in his or her family no one like to follow it.

It is the reason why traditional knowledge is going to be extinct. The nation has not still developed clear-cut policy and planning for the documentation of traditional and indigenous knowledge for preservation and promotion for further research. We could not identify the role of traditional practitioners in national health services. Model of integration of Ayurveda is still unknown and unplanned. Controversial rules and regulation and acts have made traditional healers desperate to continue the profession.

Technically and financially skilled developed countries are intently seeking alternative medicine with least adverse physical and mental effect, and attracting toward traditional medicine in developing countries like Nepal. If we cannot pay attention in protection and preservation of our indigenous knowledge, other could patent it and we have to pay royalty to use our own knowledge and local herbs to unknown country/organization.

So, it is the question of protection and preservation of traditional knowledge, technology and recipes, which have great potentialities to contribute in health of people. We can suggest and encourage people and healers to practice their knowledge and local herbs but cannot force. It is an urgent need to document the knowledge and forward scientific intervention for further research.

Chapter: 8

## RECOMMENDATION

Basic Scientific Research in  
Traditional Ayurvedic Medicine

Concise summary

Identification of  
Inventory of IK/TK



Status review of resources  
(Development process assessment)





Identify whether scientific intervention is required or not,  
if such intervention has already being applied or not  
- if not, then



Scientific intervention  
(Native technology or Recent advanced technology or both)



Development



Technology Transfer  
(to general public, industrialists, students/ scholars etc)

Expected outcomes

Resource identification - Human (skilled, semiskilled and unskilled man power),  
Medicinal Plants (indigenous, endanger, rare, medicinal, medicinal plus  
commercially valuable etc), bio-diversity, etc

Such resources would be mobilized to enhance the health as well as economic  
growth of the people, basically targeted poor group in sustainable manner.

Promotion, Protection and Exploitation of  
Ayurveda, Traditional Medicine and  
Indigenous Knowledge

---

The following activities are recommended for the promotion as well as protection of TK/Ayurveda and TM.

1. Formation of Consultant team: The consultant team with active involvement of Ayurvedic as well as MAP expert, will be responsible for
  - Status review of Ayurveda, medicinal plants in national and international level
  - Establishing the roles of different related existing institutions
  - Formulating short and long term policy and planning
  
2. Establishment of National Natural Resources, Medicinal Plants and Ayurveda Authority

Objective of the authority establishment:

To capture, protect, and commercial exploit the natural resources, medicinal plants, Ayurveda and their related intellectual property rights for the overall sustainable growth and development of the country.

To meet the above objective following activities are suggested:

- Establish Documentation, Information Dissemination and Training centers

#### Documentation:

- Traditional healers, their recipes, and technology.
- Medicinal and Aromatic plants (MAPs) and flora.
- Classical manuscripts (Old and handwritten).
- Recent development and research.
- Properties right activities.

#### Information Dissemination:

- Therapeutic and other values of medicinal and aromatic plants.
- Research developments, primary health care, diets, practices, environments etc.
- Market its demand and potential.

#### Training:

- Primary health workers, health professionals, traditional healers, school teachers, students, volunteers and general public, birth attendants, social workers, and women volunteers.
- Other related field professionals and scholars.
- Resource identification, data collection, and protection.
- Quality and sustainable farming, cultivation, growing, harvesting, drying, semi-processing, value adding, storing, transportation, production and trading,
- Inventory of local technology, improving and developing the appropriate technology and skills, and transferring these skills to the local community,
- Preservation of species, and sustainable use of nature, maintaining the environment, and bio-diversity.

- Research and Development Center

- Operational Research; Traditional knowledge, innovate research, family traditional research, community based research, institutional and industrial research.
- Institutional collaboration, cooperation, goal identification and plan formation.
- Identification of the importance of Nepal's physiographic position and phytogeographic zones.
- Explanation of the history of plant exploration and recent development in plant science within Nepal.
- Study of the status and value of plant diversity, the protected area system. And occurrence of endemic and threatened plant species.
- Resource conservation for medicinal and aromatic plants.

- Intellectual Property Right Research and Development Centre

- Identifying and clustering inventions that have distinct possibilities of being commercially worked.
- Building and strengthening the core technical and scientific competencies of its various research groups
- Exploiting external and internal technology relationships by creating linkages between participation in national and international research, and development programs to benefit innovation system.
- Identifying and documenting traditional knowledge for external protection, or scrutinizing filing of non-original inventions.

Capturing the knowledge.

- IP declaration form
- The lab notebook

Protecting the knowledge

- Decisions regarding patenting
- Keeping IP as a trade secret
- Drafting the patent application
- Filing aboard
- Monitoring the patent application

Exploiting the knowledge base

- Licensing of IP
- Publicity
- Collaboration with the industries
- Creation of Digital Library
- Research base interventions
- Transliteration

3. Strengthening of the existing Institutions / organization:

- Role identification
- Monitoring infrastructure, human resource, management, finance
- Resources mobilization

## REFERENCE

Bajtacharya, Vaidya Mana Vajra. **Hepatitis**. Piyush Ayushadhalaya, Mahabauddha, Kathmandu, 1989

Bajtacharya, Vaidya Mana Vajra. **The real facts of Ayurveda**. First edition. 1995 Kathmandu. Piyush Ayushadhalaya: page

Das, Dr Bhagawan. **Ayurvedic cures for common diseases**. 5<sup>th</sup> edition. India: Hind Pockets Books, 1995: 77-80

Dhakal, Ramji, Susei Graham and Geraldine Lockett. **Traditional healers and primary health care in Nepal**. First edition 1986. Kathmandu: Save the Children Fund (UK) in conjunction with MoH: page

Dietrich Angelia. **Trantric Helaing in Kathmandu Valley**. Book Faith Inida, 1998:

Dukin, Maureen. **Ayurvedic treatment for jaundice in Nepal**. USA 1988: Columbia University: page

Frawley, Dr David. **Ayurvedic Healing- a comprehensive guide**. Reprint 1995. India: Motilal Banarashidass Publication: page 142-144

Khaniya, Bhupendra Nirajan. **Management of Traditional Medicine: Problems and Potentialities**. The Kathmandu Post- National Daily 2003; p. 5.

Koirala, Dr Rishi Ram, **Health Challenges in 21<sup>st</sup> Century and Traditional Medicine in SAARC Region**, Nepal Country paper presented in Islamabad, Pakistan, 2002

Koirala, Dr Rishi Ram, **Problems and Potentials for Developments of Ayurvedic Sector and Protection of Traditional Knowledge in Nepal**, paper presented in a workshop organized by IUCN in Pokhara and Kathmandu, 2002

Koirala, Dr RR & Bhupendra Nirajan Khaniya.

Koirala, Dr RR & Dr SR Acharya, **A clinical evaluation of a traditional herbal compound jaundicaltrin in case of kamala**, a preliminary study report submitted to Ministry of Health

Lad, Dr Vasant. **Ayurveda - the science of self-healing**. First edition 1994. India: Motilal Banrasidas Publishers: page

Larry Peters. **Tamang Samans- An Ethno psychiatric Study of Ecstasy and Healing in Nepal**. First edition 1998. India: Nirala Publications:

M.S. Dr Chandrashekhar. Ayurvedalines. **Kamala in Ayurvedic Literature**. Ayurvedalines Jan-June 2002; page 52-54.

Madikonda Dr PK. Ayurvedalines. **The Concept of Kamamla**. Ayurvedalines Jan-June 2002; page 17-20.

Murthy, Dr NA & DP Pandey. **Ayurvedic cure for common diseases**. First edition 1997. India: Orient Paperback

Prabhakar Dr Dr S. Ayurvedalines. **Hepatoprotective activities**. Ayurvedalines Jan-June 2002; page 29-35.

Shripathi, Dr R, Singh Pro RH. **Management of medical jaundice**. Ayurvedalines Jan-June 2002; page 21-28.

Singh, Prof Dr LM and Bhupendra Nirajan Khaniya. **Ayurveda and Issue of Integration**, The Kathmandu Post- National Daily 2003, p. 5,

# **PHOTOS WITH TRADITIONAL HELAERS**

All photos are taken by  
**Bhupendra Nirajan**





Co-Investigator with a traditional healer in Patan



Sincerity of a healer to his patient- Separate packets for every dose



Purna Bahadur Lama, Bhaktapur with co-investigator



A healer is looking into the mouth of his patient- *is there yellow?*



A boy taking treatment from a healer of Ramkot- naval application of drug



Oral application of drug by a healer in Swayambhu



*Talking in mother-tongue: majority of Traditional healers in Kathmandu Valley are from Newar family, one of field assistant is talking in their own language for his convenience*



**Local herbs- local technology:** *A healer was making tablets for diabetes-patients when we met him*

Research Co- Investigator with Mukta Raj Bajracharya in Patan



Talking with a legend- far better than study in library

**A boy getting treatment of jaundice from healer in Ramkot**



Bhupendra Nirajan



Is it yellow? a healer with jaundice-patient in Bhaktapur

Sincerity: a healer making separate packets for every dose



Bhupendra Nirajan



Bhupendra Nirajan

Protection from piracy: patient has to have the drug in front of healer and not allowed to carry