

SOWA-RIGPA: A HEALTHCARE PRACTICE IN TRANS-HIMALAYAN REGION OF LADAKH, INDIA.

Research

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June 2017

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Received Date: 05th May 2017Accepted Date: 02nd June 2017Published Date: 13th June 2017

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CONFLICTS OF INTEREST

There are no conflicts of interest for any of the authors.

ABSTRACT

Background:

The science of Tibetan healing system is known as *Amchi* system of medicine i.e. *Sowa-rigpa*, which encompass and explain the moral conduct of patients and physicians, causes of diseases and methods of treatment. It is practiced mainly in the Trans-Himalayan region i.e. Ladakh (*ca.* 67,000 km²) located on the extreme north-eastern part of the state of Jammu & Kashmir, India.

Methods:

Various methods of disease diagnosis and treatment methods are used by the *Amchis* depending upon the nature and severity of the ailment.

Results:

A total of 181 *Amchis* practice the traditional way of healing system in Ladakh, which include monks and nuns. Across the valleys the concentration of *Amchis* is highest in Indus (66%) valley followed by Changthang plateau (24%) and Zaskar and Nubra valleys (6% each). Sixty percent of the total population is dependent on *Amchi* system, while veterinary health care is also being taken care by *Amchis*. The main constituents of *Amchis* medicine are metals (gold, silver and copper), stones (calcite and resin) apart from 315 medicinal plants and 38 animal parts used in Tibetan system. The medicine is locally prepared in the form of decoction, powder, pill, paste and concentrate.

Conclusion:

The plant diversity has gone down over the period and few of them have become rare due to developmental activities, such as road construction, illegal collection and anthropogenic pressure.

Keywords: *Amchis*, Traditional health care system, Trans-Himalaya.

INTRODUCTION

The world is traditionally endowed with various forms of traditional health care practices. Traditional knowledge is as old as human civilization. The traditional ways of healing diseases in rural societies is recognised as a complementary medical practice today. According to WHO [1] the traditional medicine is the sum total of knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve or treat physical and mental illnesses. As per government sources, 65% of the population depends on traditional medicine, which is the only

available source of healthcare in India by WHO [1]. There are various forms of traditional healthcare system exists around the world, viz. Ayurveda of the Indian subcontinent, the traditional Chinese medicine of China, the Kampo of Japan, the Tibetan Medicine, the Unani and Siddha. Such traditional medicine system is time tested and holds rich medical wisdom of immense importance. These medicine systems are based on sound theories and principles, exists long, efficient and successful therapeutic history. The practitioners under these systems are produced by rigorous education and training programs. These systems are part of complementary and alternative therapies, which is popularly used in developing countries (80%) including India (70%; WHO 2002).

Gurmet [2] mentioned about the *Amchi* system of medicine or *Sowa-rigpa* is one such ancient system of medicine practiced in Himalayan region of Tibet, Bhutan, Mongolia, China, Nepal and India. According to Namgyal and Phuntsog [3] this traditional system of medical treatment is usually practiced in Ladakh, Sikkim and Arunachal Pradesh in India. *Sowa-rigpa* is a combination of two Tibetan words - *Sowa* means "to care or to nourish", "to foster" and *Rigpa* means 'science or knowledge'. Thus, *Sowa-rigpa* refers to the science of Tibetan healing, which must necessarily encompass and explain the moral conduct of patients and physicians, causes of diseases, methods of treatment and other aspects according to Gyal [4]. In Ladakh 60% of the people are dependent on traditional health care system as mentioned by Kala [5], the main reason is inaccessibility, which is still a hindrance in many villages of Ladakh. The majority of the population lives in remote areas where modern medical health facilities are not available, as the area remains under snow for 5-6 months, high mountain passes and a lack of reliable road infrastructure. There are also limited health resource personal willing to spend their lives in the remote villages and many deep seated planning and implementation problems relating to health care. The traditional medicine system is practiced as an autonomous, community supported health management system, which efficiently and effectively manages the primary health care of the people. The system is still alive amongst the people in Ladakh and runs parallel to the modern health care system. The healers practicing this system are known as '*Amchis*' and are registered under *Sowa-rigpa* (National research Institute for *Sowa-rigpa*), while the actual number practicing the system could be higher. They make specific medicine according to the need of the body of a person and the disease. The medicines are mostly plant based and most of the raw material is extracted from the wild. Mostly the plant material is collected from the higher regions, where various medicinal plants occur wild, and is believed that higher the passes better the plant efficacy. But now for most of the *Amchis*, going to high elevated areas by tracking seems to be laborious, so they look for convenient location, which is easily accessible and at the same time high elevation.

This system of medicine has been established in Ladakh since the tenth or eleventh century and share influences of the Indian and Chinese medical traditions, as well as from Buddhism. Pordie [6] stated that the Mahayana Buddhist tradition was a determining factor in the historical construction of Tibetan medicine system and has become its cultural matrix. The present paper deals with the introduction of the traditional healthcare system, its status and the transformations that have occurred and are ongoing in traditional healing among locals in Ladakh.

Materials and Methods

Study area

Ladakh is situated on the border in the extreme north-eastern part of the state of Jammu & Kashmir with an average altitude 3601m above mean sea level and between 32°15'N to 36°15'N latitude and 75°15'E to 80°15' E longitude bordering Pakistan and Afghanistan in the west and china in the east and north, respectively. Ladakh, administratively falls under the region of Jammu & Kashmir State of India. The region covers *ca.* 67,000 km² area of two districts namely Leh and Kargil. Ladakh is a cold desert with different valleys and mountains, and can be divided into five major valleys based on the major river system (Indus, Nubra, Changthang, Zaskar and Suru). During winters temperature drops down to -30 to -45°C and summer temperature reaches up to 40°C. The area has low annual precipitation (22-36 mm mainly in the form of snowfall for 5-7 months with little rainfall for 3-5 months), large variation in diurnal temperature, high wind velocity, low partial pressure (35% less than at sea level) and low humidity (<50%) by Chaurasia and Singh [7]. The region is known for its picturesque landscape and fragile ecosystem has a strong hold on their culture. Apart from this the cultural diversity and indigenous knowledge have been enticing the travellers and researchers around the globe. The indigenous knowledge of plants is mostly accumulated with the group of healers i.e. *Amchis*. In the present study *Amchis* were interviewed to get the information on medicinal plants as well as the material, such as animal parts, minerals etc. used by them in the preparation of medicines for various ailments (Fig. 2).

Results & Discussion

History of *Sowa-rigpa*

Amchi system has been practiced in India since ages and there are different opinion regarding its origin. The *Amchis* adhering to the Bon faith traces its origins to Tonpa Shenrab, who is said to have taught Bumshi to his son

Chebu Trishe Olmolungring in Tazik (Persia) prior to the time of the historical Buddha Stonba Shakyamuni as mentioned by Lama *et al.* [8]. But the *Amchis* in Ladakh believed that the system of healing traces its origin from the historical Buddha Shakyamuni, who is said to have assumed the form of Dangsong Rigpe Yeshe and taught the Gyushi to Dangsong Yilakye and many other disciples. Most of the *Amchis* in Ladakh attribute the authorship of the Gyushi to Yuthok Yonten Gonpo the Elder who is said to have incorporated the medical traditions of neighbouring regions into the indigenous tradition of Tibet and compiled the rGyudbzhi in the eighth century. *Sowa-rigpa* has its own central historic literary reference called 'rGyudbzhi', which describes the fundamental textbook of Tibetan medicine system. This text is commonly accepted as "*The Four Tantras*" foundation of this medicine. Gurmet [2] mentioned that the system has strong influences of Indian and Chinese medical systems.

Knowledge transmission

The knowledge transmission of *Amchis* is basically of two types. One way is direct admission in a Bachelor of Tibetan medicine system (BTMS), which is recognized course of five years like the allopathic practitioners. In India, Lhasa and other places, there are different BTMS course with regard to the training of the *Amchis*. Dusrawa (diploma) is a three years course (eligibility of 10th standard). Kuchapa degree (bachelor degree) offered in India and China is a six years course including one year of in-house training (eligibility criteria is 12th grade). *Smanrampa* degree (master course) is of three years duration. *Smarampa Chewa* degree is awarded to a distinguished *Amchi* who have rendered at least twenty years of notable contribution in the fields of Tibetan medicine research, education and clinical services.

The other way is lineage system (within family) or teacher to disciple system. Mostly the *Amchi* tradition comes from the family and it is generally passed on from one generation to the other, irrespective of male and female. Earlier it was only from father to son, which is mostly a family affair, but in recent years things have changed and now gender has no issues in becoming an *Amchi*. This practice has been popular again after the recognition in 2009 by the Indian government and youngsters are seeking admission in BTMS to become a practitioner.

According to Lama *et al.* [8] the main text of Tibetan medicine system is Gyushi, which consists of the *Four Tantras*, a variety of texts and commentaries on the identification of medicinal materials, disease and therapies, such as *Trungpe Drimey*, *Shelgi Melong*, *Menjor Lekdik*, *Baidurya Ngonpo*, *Men Ngak*, *Lhenthab*, *Jamgon Zinthik* and *Khyungtul Menjong Tongtsa* are studied by the *Amchis*. If an *Amchi* is also a Lama (monk)/Chomo (nun), knowledge may also be taught in the monastery as part of the religious training. In the absence of an appropriate teacher, students travel to distant villages to learn the system of medicine. According to a veteran *Amchi*, "Becoming an *Amchi* is not easy, one should have a poise character with six qualities: intelligence, kindness, trustworthiness, practical experience, diligence and social awareness that are expected to pose by the *Amchis*". Erstwhile *Amchis* offer their services free of charge and in return villagers use to offer the help during different farming activities. With the contemporary world things have been changed and now they charge a minimum fee, which varies from Rs. 50-100 per person.

Amchis status

In the entire Ladakh region there are 181 *Amchis*, which includes 7% monk and 6% nuns and have different level of education. As per the record of *Sowa-Rigpa* Research Center (SRRC 2011) there were 6 Post graduates (*Smanrampa*), 15 Graduates (*Kachupa*) and 15 Diploma Holder *Amchis* (*Dusrawa*). *Amchis* are part of Ladakhi society and are found in all the corners of Ladakh. Earlier every village had a one *Amchi* looking after the health care of the people. The highest concentration of *Amchis* is found along the river Indus (66%), followed by Changthang plateau (24%), Zansker valley (6%) and Nubra valley (6%; Fig. 1). Of the total population 60% people are dependent on *Amchi* system in Ladakh, while in some villages veterinary health care is also being taken care by *Amchis*.

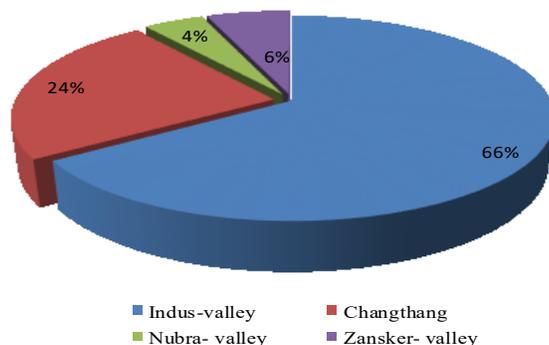


Figure 1: Status of *Amchis* in different valleys of Ladakh

Disease diagnosis

In *Amchi* system of medicine disease diagnosis is done by three different ways: Observation, palpation and questioning. The observation is done by urine analysis and looking at the tongue. In Tibetan medicine urine analysis is divided into eight sections; the physician examines the colour, vapour, odour, bubbles, sediments and albumins of the urine. The colour of the urine is determined by the intake of food and drink, seasons and diseases. The tongue observation is merely based on the colour (red or pale), texture (rough or smooth) and moisture (wet/dry) of the tongue.

The second method of diagnosis is by reading the pulse and it has been divided into thirteen sections. Reading a pulse is most important as it acts as intermediate between patient and doctor. Unlike allopathic doctors, the physician will use both hands to examine the pulse. The pulse examination is different for male and female patients, in case of male left wrist is read first, whilst for the female patient right wrist is read first. The third method of diagnosis is by interrogation, how and when the problem started, its location and which sort of food harms or helps them.

Treatment and Methods

Various forms of treatment such as medicine, medicinal bath, vein puncturing, moxibustion, and massage are used depending upon the nature and severity of the ailment. The *Amchi* clinics in Ladakh use ready-made medicines, which are mostly marketed from Daramshala or from local pharmaceutical small scale industries for various treatments.

Vein puncturing is a specialized form of treatment that requires great knowledge, experience and skill of *Amchi*. It is a healing technique through which impure blood is drawn from specific points of the body. But it needs specialisation in handling these techniques. Although, the method is useful, mishandling can lead to fatality. It is especially effective for indigestion and stomach-ache, headache, internal bleeding from injury and rheumatism. An *Amchi* is being interviewed by the authors and showing his collection of plant material and the problem of patient is diagnosed (Plate I).

Medicinal baths are usually prescribed for skin diseases, fluid retention and rheumatism. Hot spring water bath is one of the medicinal bath in which patient is advised to visit hot spring with *Amchis* or without *Amchis* for treatment of diseases like rheumatism and itching. The medicinal baths are of categorised into hot water bath, medicament bath and spring water bath. In Ladakh every year 100-150 people visit various kind of hot springs. The famous springs are Panamic in Nubra, Chumathang in Changthang and Kanji.

Moxibustion is used for treatment of infectious fluid retention, fracture, headache and mental retardness without medicines. There are different moxibustion points like head, temples, knee and spinal cord. This treatment is supposed to seal the gap through which illness-causing wind is said to enter the body. According to the *Amchis*, both puncturing and moxibustion are effective when used in combination with medicine.

Constituents of *Amchi* system

The main constituents of *Amchis* medicine are metals (gold, silver and copper), stones (calcite, resins, plant and animal parts. The medicines are locally prepared in the form of decoctions (*thang*), powder (*chhema*), pills (*rilbu*), paste (*degu*) and concentrate (*khenda*). According to Kala (2005) there are 315 medicinal plants which are given the classical text and 38 animal parts are used. Other than that plant based medicines are prepared in combination of 3 to 45 ingredients. The minerals which are most popularly used are Silajit, which is found in the interiors of Ladakh in Skurbuchan and Domkar valley. Some of the important medicinal plants are used by the healers in Ladakh is given in Table 1 and are shown in Fig. 2 and 3.

Scientific Name	Local name	Family	Parts used*	Uses
<i>Aconitum heterophyllum</i> Wall.	Bong-kar	Ranunculaceae	T	Toothache, fever, stomach complaint, gastric problem, headache and antiperiodic
<i>Aconitum violaceum</i> Jacquem. ex Stapf	Bong-nak	Ranunculaceae	R/T	Cold, cough, asthma, fever and gastric problems
<i>Arnebia euchroma</i> I.M. Johnst.	Demok	Boraginaceae	R	Hair tonic, Cough, backache, cold and cough, blood vomit and lung and pulmonary problems
<i>Aster flaccidus</i> Bunge	Lukmik	Asteraceae	F/S	Eye treatment, liver disease and fever
<i>Cremanthodium arnicoides</i> R.D. Good	Nimmagorgos	Asteraceae	F/Sh/S	Peptic ulcer, dysentery, fever and liver disorder

<i>Dactylorhiza hatagirea</i> (D. Don) Soo	Wangbolakpa	Orchidaceae	T/L	Health tonic and aphrodisiac
<i>Delphinium cashmerianum</i> Royle	Chargos	Ranunculaceae	S/F/Sh	Cold, cough and fever
<i>Hyoscyamus niger</i> L.	Gya-Lhathang	Solanaceae	L/Sh	Sedative, toothache, cough, headache and asthma
<i>Meconopsis aculeata</i> Royle	AchaK-srmum	Papaveraceae	L/Sh/R	Headache, against ulcers, disorders of lungs, liver and inflammation and pharyngitis
<i>Papaver nudicaule</i> L.	Tshersngon-serpo	Papaveraceae	L	Analgesic and cold
<i>Podophyllum hexandrum</i> Royle	Tandik	Berberidaceae	F/Fr	Skin diseases, blood dysentery and constipation
<i>Rhodiola imbricata</i> L.	Rholo karmo	Crassulaceae	W	Congestion in chest and cough
<i>Rhodiola tibetica</i> (Hook.f. & Thomson) Fu	Rholo	Crassulaceae	L/Sh	Headache
<i>Saussurea schultzei</i> Hook.f.	Spangsitabo	Asteraceae	L/F/R	Retardness and depression

Table 1: Important medicinal plants, parts used and their uses in *Amchi* System. * B = Bulb, F = Flower, Fr = Fruit, L = Leaves, S = Stem, Sh = Shoot, T = Tuber, W = Whole plant



Figure 2: *Amchi* is being interviewed by the authors and showing plant material used to cure various diseases (a); patient is being monitored by the *amchi* (b); and woman *Amchi* is going through the traditional literature (c).



Figure 3: Important medicinal plants collected by *Amchis* in Ladakh

The treatment of simple problem can be done with the help of the wild plants and available plants in their kitchen gardens. The medicine can be prepared in a variety of forms depending on their purpose. Such technique includes extraction of liquid from herbs; mashing herbs into a paste; decoction by boiling down the herb in water; hot infusion like hot tea-herb stewed in hot water. *Brokpa*, the descendants of the King Alexander the great, treatments include soups especially *thuksing* prepared from local ingredients. The coriander (*Coriandrum sativum*) leaves are ground and boiled in water to make a tonic for abdominal cramps and diarrhea and *Lhagtangtse* (*Hyoscyamus niger*) seeds are used for toothache. They grind *saunf* (Fennel seed) and use it for dysentery, as a digestive stimulant, and for excessive thirst. They also use ground and boiled *Kala zeera* (*Carum carvi*) with *thuksing* (local soup) for cold and cough. *Bogakarpo* (*Aconitum violaceum*) tubers are used for stomachache. For the treatment of inflammation, *Dakjun* (Silajit) is applied and massaged with butter or apricot oil. For the treatment of backache and pain in chest or ribs they use warm ashes in a piece of cloth and touch-heal at location of pain. *Marzan* hot food, comprising *Sattu* and lots of butter it is used during child birth. The well known veterinary disease is *Khachu* (kind of mouth ulcer in cattle) which is widely being treated by rubbing *tsari* (*Cicer microphyllum*), which is available in all the valleys and also used for making *chutnis* (sour sauce).

Resource and usability

Earlier *Amchis* were using both animal and plant parts from the wild, due to stringent laws things have been changed, which barred them from killing and using the wild animal parts in their medicine, while plants are still extracted from wild. *Amchi* recites few mantras before the collection of plant material, which signify his intention to collect plants and thus, would increase their intrinsic power. According to them the best collection days are the 8th and 15th (full moon) days of each lunar month. The plant efficacy depends on the area from where it is extracted and *Amchis* believes that the plant efficacy increases with increase in altitude. *Amchis* also felt and observed that over the years medicinal plant diversity has gone down and few of them are in scarcity, for which habitat destruction due to road construction, illegal collection and anthropogenic factors are the main reasons. The healers/practitioners are dependent on the medicinal flora and every year they go for collection of these plants. Other than *Amchis*, illegal collection is done by the locals or sometimes by the outsiders for some company, which has led to the dilution of some important medicinal plants. The region is open to access and is a common resource pool for the locals, as it considered as common property. As a result, there is no identifiable entity to accept management responsibilities, which also led to the degradation of community rangelands.



Figure 4: Important medicinal plants collected by *Amchis* in Ladakh

CONCLUSION

The economic and social conditions of locals are different from the conditions that prevailed in 19th century. The level of knowledge about causes of illness and its treatment is low among locals. The concern is to increase awareness levels, so that efficacy of existing services could be enhanced significantly. The most important need among locals is to bring change in the social attitude to bio-medicine and health care. Given the social environment of the tribal areas, this could be achieved by social intervention to overcome social or psychological resistance. Indigenous knowledge system and traditional survival strategies are part of the mountain ecosystem that is not valued adequately in the march towards modernization. The greatest challenge for *Amchis* would be integration of the traditional *Amchi* system with the new and modern system of medicine, to decelerate the pace of environmental degradation and for eco-friendly economic development. A move has been taken by the Government of India by recognizing it and also by partial introduction of *Sowa-rigpa* into few hospitals, but still there is a long way to go. Merely introducing partial support will not help the *Amchis* as most of them are without equipment's and medicines. Since the present study focused only on the introduction of a healthcare practice, further nationwide study is necessary to better understand the kind of role *Sowa-rigpa* plays in the arena of public healthcare system.

Acknowledgements

The authors are thankful to Director, WII for providing necessary facilities. One of the authors (KA) is thankful to University Grant Commission (UGC), New Delhi for providing Rajiv Gandhi National Fellowship.

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