

BLOOD LETTING AND CAUTERIZATION IN BHUTANESE TRADITIONAL MEDICINE

Drungtsho Tendril Wangdi, Senior Lecturer, National Institute of Traditional Medicine

Introduction

Bhutanese traditional medicine is based on the *rGyud-zhi* which propounds the four fold mode of treatment viz. diet; behaviour; medication and accessory therapies. Blood letting, cauterization, embrocating, medicated bath and massage constitute the five popular accessory therapies.

Therapeutic efficacy of blood letting and cauterization is generally accepted by TM practitioners and the patients alike. However, there are no studies conducted so far on safety and efficacy; validation of indications and standardization of their application. With these as biggest concerns, a need for the present research was felt necessary. Therefore, a study was carried out on the blood letting and cauterization with the following objectives:

- Assess the ascribed medical benefits of blood letting and golden needle therapy as recorded in *gso-ba-rig-pa* literature.
- Identify ways to harmonize and standardize blood letting and cauterization with golden needle therapies amongst TM practitioners
- Assess the safety of blood letting and identify appropriate precautionary measures

Methodology

Research design and data collection

The study was carried out on a randomly sampled study subjects that have availed blood letting and golden needle therapy in the past 10 years and comprises of children, adult and old people of both gender from different dzongkhags. Several classical medical treatises were referred for theoretical verification of indications and contraindications, degree of application, identification of bloodletting and cauterization points, and age group. The interview designed for the research covered TM practitioners of all the 20 districts including National Traditional Medicine Hospital (NTMH) and a large number of patients. Individual opinion on the efficacy of the therapies and their drawbacks and further improvement needed were placed at the core of the interview. Moreover, the record of bloodletting and cauterization from 1998 to 2006 was thoroughly analyzed for evolutionary changes through the years.

Results and discussions

rGyud- zhi or the four medical *tantras*, which is generally accepted as the complete and standard text book for study of *gSo-ba Rig-pa* (science of healing) is believed to be taught by Lord Buddha. Various means of treatment, according to the *rGyud- zhi* can be pragmatically condensed in four fold mode of treatment:

- i) Correct diet
- ii) Wholesome behaviour
- iii) Medication and
- iv) Accessory therapies

Treatment of an ailment begins with appropriate dieting and behavioural pattern, followed by correct medication. If an ailment persists even after prolonged adherence to the three peaceful means of treatment, accessory therapies like blood-letting and cauterization are finally applied.

Such therapies not only combat the latent disorder fully but also act as prophylactic means to avoid future reoccurrence.

A substance which eliminates diseases through the exterior of the body and cures them is called external therapy or *dpyad*. It literally means examination or diagnosis. Different therapies applied externally to subsidize pain is called *dpyad* because it is only through proper examination that the nature of and ailment and its appropriate treatment can be established. *Ashtanga Samgraha*, a 7th century medical classic recognizes it as an excellent therapy, which not only cures diseases non responsive to all other forms of treatment but also acts as an effective prophylactic agent.

Therapies are primarily classified into two viz. non-invasive (lit. soft) and invasive (lit. coarse). Non-invasive therapies include fomentation; medicated bath; and massage (lit. application of ointment), whereas blood-letting and cauterization constitutes invasive category. Combination of the both is popularly known as *pchyed-nga* or the five therapeutics.

Universe, the macrocosmic world and body, the microcosmic world are both composed of five Cosmo-physical elements (earth, water, fire, wind, and space). The elements inherently possess either hot or cold energy, or so does the elements inside the body. Dominance of hot or cold energy brought about by an ailment, give rise to two primary disorders of hot (*tshawwa*) and cold (*drangwa*) respectively. Blood-letting is said to be effective for hot diseases and cauterization or golden needle therapy for cold disorders.

A. Blood-letting

Somaraja or “king of the moon”, a classical medical treatise recognizes three different types of blood-letting as follows:

- i) Incision (lit. cutting)
- ii) Piercing(lit. drilling)
- iii) Draining

The text also enumerates various indications for blood-letting and its procedures.

Indications

Traumatic fever (*grams-tshed*), disturbed fever (*khrugs-tshed*) injections, swelling, wounds, gout, rounded red rash on the skin associated with sores on specific organs, erysipelas, abscesses, Leprosy, disorders of liver, pancreas, eye, head and in general, all the hot diseases caused by imbalance of blood and *mkhripas*.

Contraindications

Diseases influenced by evil spirits, emaciated, expecting mother, post natal period, dropsy, chronic metabolic disorder resulting in wasting of bodily constituents, low power of digestion, and cold diseases arising as a result of *bad-kan*, *rlung*, old age, children below 16, amnesia, exhausted by work and stress, right after application of eliminating therapies like purgatives, emetics, nasal irrigation, etc.

Blood-letting should be avoided in 4th, 5th, 6th, 10th, 11th, and 12th Bhutanese months; on vital spots of the body and; on auspicious days as predicated through astrological calculations; latent spot of the life force.

Preliminary observances

Different decoction is prescribed for different diseases at least 3 days prior to the day of blood-letting. The decoctions not only differentiate the infected blood (literarily bad/diseased) and the normal blood, but it also makes the pathological changes fit for blood-letting.

Failure to administer the decoction prior to venesection will result in incomplete letting of infected blood and aggravation of *rlung* besides draining out the useful normal blood. However, there is consistent shortage of decoction supply in the therapy unit. Common reason quoted is deviation of resources to commercial products in the PRU (pharmacy and research unit). Certain amount of curd that remains after extraction of butter and cheese, and alcohol is said to be helpful in proper circulation of the blood. However, its use has been lost to the changing times for good. Exposure to heat before blood-letting and remaining cool after it is over is a mandatory observance. After careful selection and marking of the venesection point, the patient uses sun or other sources of heat to warm up while the physician prepares necessary equipments which include lancet, tourniquet, cotton, dry bamboo sticks, kidney dish, distilled water, bandage, coagulants, and medicines for wound. The physician then puts on safety apron, mouth cover, hand gloves, etc. A need is felt for continuous supply of these safety equipments in all the TM (traditional medicine) units.

In the village's blood-letting and cupping has become a major cause of concern for deterioration of the condition of the patient and cross infection of dreaded diseases like HIV and AIDS. It's because the local practitioners neither observe preliminary observances nor recognize indications and counter indications. As prevention is always better than cure, it is important for the local practitioners to get proper education and awareness.

General therapeutic action

Following are the general therapeutic actions of successful blood-letting:



Fig.1 Drungtsho incising the chey-tsa below the tongue

- clearances of infected blood
- recovery of illness related to channels
- reduces pain and swelling
- drain out accumulation of pus and dries up other morbid lymphatic accumulations.
- emaciated gains body mass
- decreases obesity

Post-blood letting procedures

- Tourniquet is removed carefully. The incised point is gently massaged and washed with pure cold water followed by fomentation with cold stone.

- The wound is bandaged after application of an herbal recipe consisting of eight ingredients.
- If blood flow fails to stop on time, then the blood vessel is cooled down with cold water and cold-stone fomentation; application of cotton dipped in cold water or clotting is enhanced with application of ashes prepared by burning bones weathered by sunlight and rain; cauterization and etc.
- Swelling caused by blood remaining under the derma is alleviated by: oozing it out with exertion of pressure at the two ends of the cut; sucking with a horn; incision with lancet; and etc.
- Swelling due to incision of muscles and infection is pacified with help of various fomentation mixtures.
- If the patients faints or gets unconscious due to aggravation of '*rlung*' then it is treated by: Smoking of *rlung* medicines; ingestion of sweets; application of nutmeg (*Myristica ficafragrans* Hount.) boiled in on the energy points of *rlung*; consumption of alcohol and soup prepared out of bones and etc.
- It's mandatory for the patient to avoid all types of alcoholic diseases and cold water for 7 days after blood-letting
- Patient should take rest.

Blood letting today

Except for the golden needle therapy (cauterization with golden needle), most of the therapies described by the *rGyud-zhi* is infrequently used in daily practice. In the training curriculum, both cauterization and bloodletting are given equal importance in terms of memorization of the basic text and study of commentaries. But in practice, the later is seldom used by the drungtshos and smenpas in the districts. In a query about the situation they pointed out the following reasons:

- Lack of hand to hand instruction during the limited hours of practical apprenticeship in the training period.
- Nil or inadequate supply of sterile kit and other necessary materials from the centre.
- Absence of refresher course
- High risk involved

Drawback

Owing to its convenience, efficacy and drastic results it is being used by clergy and other local healers back in the villages. Although its application can subsidize pains, safety and efficacy has become a major challenge. They do not administer preliminary decoction for differentiating normal and the diseased blood therefore draining out considerable amount of normal blood. Moreover they venesect where ever the pain exists, ignoring proper recognition of indication, contraindications, latent position of the life force and vital spots of the body. Their practice is not only bereft of strong literature-based theoretical backup but also means because they are least aware of the sterile kit for disinfection and other necessary observances as discussed earlier.

B. Cauterization

Cauterization is an effective therapy propounded in the *rGyud-zhi*. '*Somaraja*' as well as *Ashtanga Samgraha* (the eight branches), a 7th century Ayurvedic treatise, teaches methodology of cauterization and praises its efficacy. Different materials are used for cauterization. Moxa,

gold, silver, copper, iron, stone, animal horns, wood, oil and linen are some of them. Their use remained vibrant through the centuries because of their efficacy. However, in competency of the practitioner and failure to identify appropriate energy points lead to undesirable side effects such as paralysis. Keeping in mind the hazardous side effects that the incompetent use of crude material (mentioned above) can cause to the patient and in response to the increasing interest of modern man towards therapies with soft stimulations, cauterization has been slightly modified. Today a needle made of pure gold is the single most cauterizing agent popularly practiced in Bhutan. The needle which measures more than three *sors* in length is generally not bigger than the size of an average wheat grain. One end is sharp and the other end is twisted in order to be able to hold the moxa. Cauterization with golden needle has gained popularity in Bhutan since the formal institutionalization of *gSo-ba Rig-pa* as an integral part of national health care delivery system in 1968 under the royal command of late his majesty, the third Druk gyalpo. Drungtsho pema dorji, director emeritus and Drungtsho sherab jorden were the first two physicians to work in the newly opened dispensary.

Types of cauterization

There are many types of cauterization. Following are some of the most popular ones in use today:

1. Golden needle therapy or cauterization with golden needle
2. Moxibustion
3. Gold cauterization
4. Silver cauterization
5. Copper cauterization
6. Iron cauterization
7. Heated oil cauterization
8. Horn cauterization
9. Wood cauterization
10. Stone cauterization
11. Tooth cauterization
12. Cloth cauterization

General benefits of cauterization

- Helps in clotting (in bleeding)
- Reduces pain
- Pacifies aggravated *rlun*
- Promotes digestion
- Destroys malignant tumors
- Heals chronic wounds
- Reduces swelling
- Dries up lymphatic disorders
- Guards the passage to the five solid and six hollow organs
- Increases body heat
- Clarifies senses
- Ultimate and final treatment when other forms of treatment fail

General indications

Indigestion, dropsy, tumors associated with cold disorders, *mkhrispa* associated with cold, lymphatic disorders, malignant tumors, inflammation associated with throat and muscles, inflammation associated *rlung*, epilepsy, insanity, neurological disorders.

Cauterization is generally prohibited for hot disorder. However there are hot diseases which respond to it. They are:

1. Out flow of *mkhripas* into channels.
2. Entrance of *rlung* into central nervous system.
3. Aggravation of *rlung* after treatment of a hot disease.
4. Injection associated with *rlung*.
5. Inflammation associated with throat and muscles.

Prohibited time

It is avoided during rain and snowfall. It can nullify the effect of heat energy produced by cauterization and expose the wounds to infection. Different date, day and time are inauspicious for cauterization at different points of the body. This is because of the constantly moving life force. Therapies of any kind should be avoided on the latent location of the life force. (Table 1, 2, 3).

In practice, strict adherence to these observances often create inconvenience to both the patient and the physician. For example blood letting is avoided on 30th day of the Bhutanese month because the life force is said to be pervading the entire body on this date. The situation becomes unmanageable when this date coincides with a Friday because the next day i.e. Saturday is inauspicious for both cauterization and blood letting and third day i.e. Sunday is a holiday. Traditional practitioners are of the opinion that in such a situation the therapies can be conducted even on a Saturday after appropriate propitiation like recitation of mantra and etc.

Golden needle

Gold (Aurum) is an auspicious metal. There are many legends and facts to support its auspiciousness. Lord Buddha was himself endowed with golden complexion and blessed all the invaluable matters including soil to be yellow in color. Gold comes first in the series of five precious metals. Brahma and Indra requested Lord Buddha to turn the wheel of doctrine by offering golden wheel with thousand spokes.



Fig. 2 Golden and silver needle.

Therapeutic value of gold

According to the four Tantras (*rGyud-zhi*), gold is astringent in taste and has a cool potency. It is ascribed with several therapeutic efficacies. It is an antidote and promotes longevity. Moreover, cauterization with golden needle is less painful compared to other cauterizing agents like iron rod therefore reassuring patient compliance. It is accredited with multitude of healing capability like rejuvenation of cut vessels, diseases of brain matter and etc.

Hygiene and disinfection

The last and final chapter (256th) of the *rGyud-zhi* stresses hygienic living and preventive measures for a healthy living. Today, it is of even more concern because of the dreaded disease like HIV and AIDS.

Following measures are taken in order to disinfect the procedure and prevent transmission of diseases:

- Sterilization of needle and other instruments
- Physicians and assistants put on appropriate apron
- Use of rubber hand gloves
- Use of forceps (naked hand should not touch any of the instruments).
- Needle and lancets are properly disinfected after use and stored in a savlon solution.
- The instruments are treated as objects held by protecting deities and they are carefully placed in the sterile kit.
- Favorable day and time based on astrological calculation and the latent place of life force (*bla*) is correctly identified.

Preliminary practices

The process begins with a prayer to the medicine Buddha; pantheon of medical deities; and lineage holders of *gSo-ba Rig-pa*, followed by recitation of medicine Buddha mantra.

Five point application

Golden needle is applied on a single point on chi- tshug and mtshog-sang (located on the head).



Fig.3 Applying golden needle therapy on the back of a patient.

On other parts of the body it is applied at five points in a single shot. The distance between the points is not fixed and drungtshos and smenpas base their practice on teaching of their master and on their own experience. Different practitioners have different explanations. However, eminent senior drungtshos including the head of the therapy section agree on the following justifications:

a. External

The effect of five-point application is equivalent to one cauterization with cauterizing rod.

b. Internal

Upholds patient compliance besides reducing chances of ulceration.

c. Secret

This explanation is based on the vajrayana school of Buddhism. According to it, the five different points of application represent five wisdoms while the heat represents the fire of these wisdoms that can engulf: all diseases arising from the basic ignorance; evil influences; heavy karmic burden; and attachment, ultimately leading to enlightenment. Today, new generation of practitioners is immune to such methodologies and need is therefore felt of procedural standardization.

Time gap

rGyud-zhi says that at least 7 days of gap is necessary for repetition of cauterization on the same spot but it doesn't mention exact number of days both in bloodletting and cauterization. In a query, many drungtshos and smenpas said that it differed according to the intensity of heat in the last practice and the latent state of the wounds produced, if any. Others are of the opinion that it should be repeated in a time frame of 7-21 days. However there is no standard time frame set so far.

Golden needle therapy today

Majority of the patients accept the success of golden needle therapy on the indications described by the *rGyud-zhi*. Very few patients disagreed and it usually came from patients who had undergone the therapy for counter indications either due to negligence of the practitioner or strict adherence to patients view. Otherwise its efficacy has proved to be trust worthy.

Many patients come to drungtsho or a smenpa and ask for golden needle therapy, because they think that it is appropriate for them and indeed it does work most of the time due to placebo effect. Denial, even after rational explanation pose threat to the Patient-Drungtsho relation ship and there by trust and confidence between the two. Patient satisfaction then becomes a concern compelling to the physician to apply the therapy (of course very gentle) even in counter indications. However, it is always wise to decide the appropriation of the therapy through correct diagnosis. Patients should be made to understand that it is appropriate to choose a therapy through proper diagnosis of the disease rather than following their blind faith.

Prophylactic action

Therapies like cauterization and blood-letting are said to be prophylactic in nature in the sense that they can prevent future reoccurrence of the same disease. However, in practice, says drungtshos and smenpa that it is true for only one to two years and many illnesses reoccur after that. "For instance, many patients respond with the same remark- Golden needle therapy should efficacy for one year and the illness is back again". Therefore, golden needle therapy is not only used as a prophylactic agent but it is also applied as an accessory therapy assisting medication and as an analgesic substitute.

Table 1: Different therapies conducted in therapy section from 1989-2006.

Year	BL	CP	HC	GN	SN	Cau	MOX	HOC	IC	Total
1989	6	00	00	8418	00	19	40	00	00	8483
1990	42	00	00	3074	00	254	328	00	00	3698
1991	29	00	00	3088	00	29	21	00	00	3167
1992	6	00	00	1251	00	6	8	00	00	1271
1993	39	00	00	2491	00	79	48	00	00	2657
1994	8	00	00	469	00	40	42	00	00	559
1995	87	00	00	3043	708	340	185	00	00	4363
1996	28	00	00	1938	00	68	112	00	00	2146
1997	34	00	00	2838	00	72	314	00	00	3258
1998	38	14	00	28504	2874	204	309	00	00	31943

1999	42	4	00	24906	1345	154	105	42	00	26598
2000	94	6	17	24199	1404	84	77	645	5	26531
2001	84	15	23	26286	154	88	871	486	284	28291
2002	78	6	16	15077	1226	27	48	468	00	16946
2003	85	7	16	16934	3302	32	46	549	10	20981
2004	117	1	13	16760	1233	21	46	374	105	18670
2005	96	2	21	12658	1440	14	47	988	45	15311
2006	98	283	36	11914	1507	27	58	1199	44	15166

BL=Blood letting, CP=Cup-ping, HC=Horn- cupping, GN=Golden needle, SN=Silver needle, Cau=Cauterization, MOX=Moxibustion, HOC=Heated oil cauterization, IC=Iron cauterization

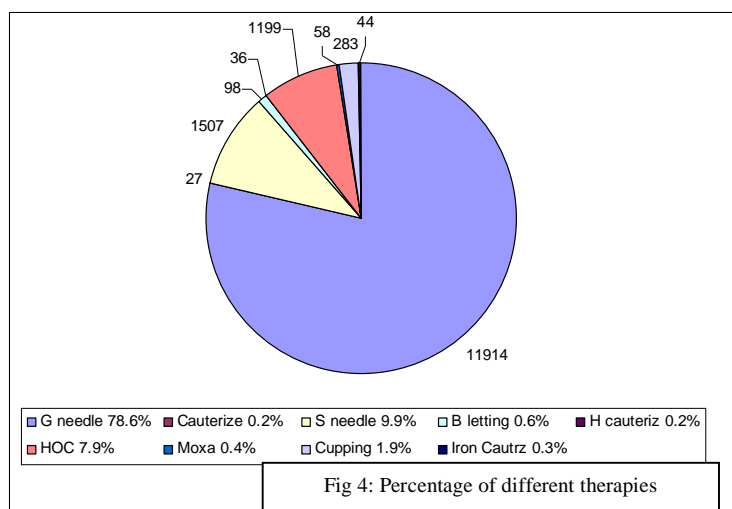


Fig 4: Percentage of different therapies

Table 2: Top 14 diseases for Golden needle in 2006

Sl.No.	Diseases	Male %	Female %
01	Gouts (dregnad)	77.27%	22.73%
02	Neurological diseases (tsadkar)	37.45%	62.55%
03	Khrag rlung	45.05%	54.94%
04	Rlung nad	36.36%	63.64%
05	Mkhal gdrang	46.19%	53.81%
06	Skin infection (pagnad)	51.47%	48.53%
07	Arthritis (drumbu)	44.03%	55.97%
08	Diseases of Head (gonad)	39.13%	60.87%
09	Mkhal gdam	50.00%	50.00%
10	Trauma (dabdrams)	57.63%	42.37%
11	Sinusitis (yathrag)	36.84%	63.16%
12	Snying rlung	16.33%	83.67%
13	Epilepsy	37.62%	62.38%
14	Stomach diseases associated with bad-kan	38.54%	61.46%
	Total	43.99%	56.01%

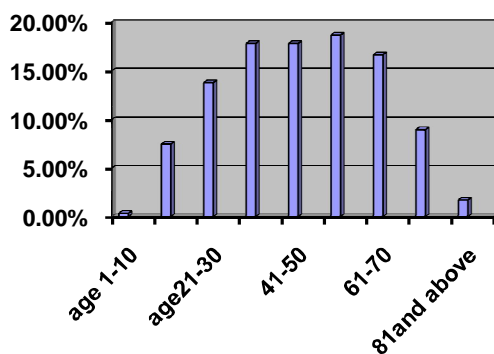


Fig. 5: Percentage in different age groups

Conclusion

Currently there is no standard manual for blood letting and cauterization and practices vary among practitioners depending on their actual experience and theoretical competency. Medical treatises differ slightly in explanations which is enough to create doubts in actual practice if not misconception. Never the less, their applications constitute highest number of therapy conducted in the National Traditional Medicine Hospital and the district TM units. In 2006 alone 11,972 i.e. 26% of the patients have availed golden needle therapy. Although golden needle therapy and blood letting are emphasized equally in the training curriculum, the later is hardly used in actual practice. For instance only 98 patients availed blood letting therapy in 2006. The reason behind this wide gap is unavailability of necessary equipments and poor patient compliance due to the invasive nature of blood letting besides lack of adequate practical training.

Their efficacy in case of the indications described by the *rGyud-zhi* has remained unmoved which is evident from the patient viewpoint except for the prophylactic action of the golden needle therapy, which is disagreed by both the physicians and the patients. Few patients and physicians have reported development of resistance to golden needle therapy which needs to be verified through proper studies.

Blood letting and cauterization to some extent, practiced by local healers in the tribal locality and villages, has become a major concern for health workers and the society alike owing to the great risk of infection like HIV and AIDS besides aggravating the latent condition of the patient. An immediate action is therefore necessary in order to educate the local healers on the subject or regulate their practices through a proper forum.

There is a wide scope for further study and research on these therapies in order to make them more effective and save in an afford to improve the services provided by Bhutanese Traditional Medicine.

Recommendation

It is recommended that:

- Golden needle is heated before application while conducting the therapy on the part of the body where it is uncomfortable to hold the Bunsen burner and heat it at the time of application for comfortable points.

- The practitioner clearly identifies the indications and contraindications before application of cauterization. A system should be in place to monitor the situation because the study has shown that cauterization is also being used for contraindications.
- The TM units in the districts should be supplied with adequate instruments besides providing timely refreshment course on TM therapies. The study confirmed the lack of adequate instruments and refresher course despite repeated plea in meetings with senior leaders of TM.
- The needle should be made of pure gold in order to yield the benefits as recorded by the *rGyud-zhi*.
- Golden needle therapy should be repeated for 3-4 times after a time gap of 2-3 weeks each.
- Golden needle has not shown any noticeable adverse effects even when conducted on vital points of the body. However, care should be taken to avoid the vital points as much as possible.
- The number of days that a patient should observe the post-cauterization observances differs among the practitioners. It ranges from one day to three days and therefore an immediate standardization is necessary.
- Age group appropriate for undergoing the therapy needs to be harmonized. Some practitioners believe the appropriate age mark as 14 while others agree as 15 and others recognize as 20 years.
- A system should be in place to check the authenticity and accuracy of the report on the therapies conducted in the district TM units which form the basis of information bank at the centre.
- The present design of training curriculum which demands 50% practical need to be continued.
- The lancet used for blood letting should be sterilized according to the scientific standards in order to prevent infection.
- Use of blood letting by the local healers back in the villages pose a great threat to infection and worsening of an ailment and a need to either educate or restrict their practices is immediately felt.
- Appropriate solvent need to be employed for cleaning the golden needle. All the needles covered in the study were found darkened due to repeated heating.
- Further research and studies are not only necessary on these therapies like development of resistance to golden needle therapy but other forms of traditional treatment like nasal irrigation and fomentation also demand standard clinical research.

References

1. *rGyud-zhi*, 17th century block prints of Punakha Dzong, Bhutan.
2. Jamtsho, Sangay. *Vai-dur-snoen-po*, 17th century block prints of Punakha Dzong, Bhutan.
3. Dpyad-Ingai lag-dheb (2007). Practical manual for five accessory therapies, ITMS.
4. NITM (1991). Standardization of traditional procedures: for the practitioners of gso-ba-rig-pa in Bhutan.
5. Tsheynam, Throru (2000). *Drang-song zshel-lun, si throen me rig pe struen khang*.
6. Samten (1997). *skya-reng-sar-pa , bod sjong me mang pe truen khang*.
7. Dash, Baghwan (1994). *Encyclopaedia of Tibetan medicine*, Sri Satguru publisher.

8. Saunders, W.B. (1999). Dorland's illustrated medical dictionary, 28th edition.
9. Wangdue (1982). Sorig-tshig-mzod- gyuthog-dgong-rgyen, me-rig-pe struen-khang, Lhasa.
10. Choedrak, D.L.(1992). Smed-cha.
11. Tashi (1998). Rgyud zshi-ka drel, me-dmang pe-struen khang, Lhasa.