

MEN-TSEE-KHANG

(Tibetan Medical & Astro. Institute)

Background

Men-Tsee-Khang (Tibetan Medical & Astrological Institute) was initially established by H.H. the 13th Dalai Lama in Tibet in 1916 with the sole objective of preserving Tibetan medicine and astrology, catering optimum medical facilities to the people and as a centre for higher study and research on Tibetan medicine and Astrology.

Tibetan medicine is based on thousand years of empirical evidence and ancient texts. The popularity of Tibetan medicine has soared over last few decades owing to its effectiveness in treating many chronic diseases with little or no significant side effects.

With the brutal invasion of Tibet by Chinese Communist Regime in 1959 and destruction of hundreds of monasteries, institutes, hospitals and imprisonment of innumerable people, H. H. the 14th Dalai Lama was forced to fled to India followed by thousands of his followers. Under the vision of H.H. the Dalai Lama of preserving Tibetan culture and making it accessible to the rest of the world, Men-Tsee-Khang was re-established in India on 23rd March 1961. Men-Tsee-Khang is a charitable, cultural and educational institution registered under the Societies Registration Act of 1860 (No. 1290/79).

Men-Tsee-Khang initially raised herself in a small solitary room up in the woods to grow into one of the main centres of study and research on Tibetan medicine outside Tibet. With the strong patronage of H.H. the Dalai Lama and efficient staffs, Men-Tsee-Khang today has shaped into a full-fledged medical and astrological institute with almost 500 inspiring staffs and 50 branch clinics scattered around India. Men-Tsee-Khang houses a strong infrastructure of Pharmaceutical Department, Tibetan Medical and Astro. College, Clinical Research Department, Materia Medica Department, Literary Research Department, Herbal Product Research Department, Astrology Department, Translation Department, Museum and administration Department.

With the increasing popularity of Tibetan medicine, Men-Tsee-Khang doctors and astrologers regularly visit Europe, Canada, USA, Russia, Japan, Thailand and many places in India for conferences, seminars, consultations, and exhibitions. The patient outreach of Men-Tsee-Khang through all its branch clinics in the year 2006-07 was 4,41,561 including all the patients who were provided with free or concessionary fee for the treatment.

Further elaboration on some of the important departments functioning under Men-Tsee-Khang:

1. Tibetan Medical & Astro. College (TMAC)

Tibetan Medical & Astrological College was founded on 2nd June 1961 under the auspicious blessing of H.H. the 14th Dalai Lama. The main objective is to preserve the

rich and ancient wisdom of traditional Tibetan medicine and astrological science, and to impart this wisdom to younger Tibetan generation and rest of the world.

TMAC opens admission once in every five-year. The candidates should have good command in written and spoken Tibetan language. The candidates are selected on merit basis through an entrance test. There is a quota of three seats for the Himalayan and other non-Tibetan candidates. However, there is no exception with regard to the entrance test. Tibetan medicine and astrology course is for five-years plus a year internship after which Kachu-pa degree is awarded. There is an advance course for attaining higher level of degree in the form of Men-Ram-Pa at three different levels of 10, 16 and 18 years after the completion of Kachu-Pa degree. So far, 234 doctors and 39 astrologers have graduated from TMAC and are working under Men-Tsee-Khang in different capacities.

TMAC's library houses wide range of books on Tibetan medicine, astrology, Buddhist philosophy, Tibetan history, grammar and poetry. It also fosters vast collection of books on other discipline of medicines, medical and intellectual journals and is open to everyone.

2. Pharmacy Department

Pharmacy department is one of the largest departments in Men-Tsee-Khang. The department is responsible for the production of about 160 different medicines in various forms, such as decoctions, powders, pills, medicinal beverages, butter tonics and medicinal pastes as well as precious compounds. From here the medicines are dispensed to all the Men-Tsee-Khang's branch clinics in India and Nepal. The medicines for mail-consultations are also dispensed from here.

3. Research & Development Department

Since the re-establishment of Men-Tsee-Khang (MTK) in 1961, MTK has worked consistently in fulfilling its primary objective of preserving, promoting and developing Tibetan medicine. Even though MTK has always realized the importance of initiating a research study and developing Tibetan Medicine further, her early phase of journey was restricted to preserving the very identity of Tibetan Medicine due to the dire situation and limited resources. MTK was able to stretch further by early 1980 owing to growth of staff and wider infrastructure. Research & Development (R&D) department was first incepted in 1984 building the initial block of documentation and case studies. Realizing the importance of this department, R&D is branched into three sub-divisions as follows:

a) Clinical Research Department

b) Materia Medica Research Department

c) Herbal Product Research Department

a) Clinical Research Department:

The popularity of Tibetan Medicine grasped the amazing height around the world and so does the degree of skepticism about Tibetan Medicine in medical fraternity. As often stressed by His Holiness the Dalai Lama, the need of doing a clinical study and initiating a collaboration work was felt strongly not only to evaluate and authenticate this system

but also to enable Tibetan Medicine to reach wider population giving them an opportunity to be benefited from it.

Clinical research department has initiated various collaboration projects and has done numerous clinical studies, cell line study, toxicity study and health survey. Following are the projects that have been completed with some very interesting results.

i) Rheumatoid Arthritis: A pilot study on the effect of Tibetan medicine on patients with rheumatoid arthritis was done in collaboration with Institute of Biological Anthropology of Oxford University for three months from 1st May - 30th July 1994 at MTK branch clinic at McLeod Ganj, Dharamsala. There were 103 patients and it was a comparative study between Tibetan and Western medicine. The Tibetan Medicine treatment involves advice on diet, behaviour and external application in the form of paste. Tibetan Medicine showed some 80% improvement though it was not conclusive statistically. Western medicine showed greater relieve in alleviating pain while Tibetan Medicine showed more improvement in the joint movement. The paper was published in Men-Tsee-Khang official Tibetan Journal in its IV volume.

Another pilot study was done in collaboration with Dutch Foundation for Tibetan Medicine for 12 months from March 1996 - March 1997. The primary objective was to register the effect of Tibetan Medicine on the treatment of patients with rheumatic diseases. It was an open label, non-interventional, single-centre, phase IV pilot study. The patient received the Tibetan Medicine next to their usual treatment, if any. After a year treatment, improvement can be seen in 9 out of 12 parameters. Since only subjective parameters were measured in this pilot study, a clinical trial measuring also objective parameters (such as: hemoglobin, platelets, blood sedimentation rate and immunoglobulins) is crucial to prove if Tibetan Medicine can be of use in the treatment of patients with rheumatic diseases.

ii) Diabetes Study: Efficacy of Tibetan Medicine as an adjunct in the treatment of type 2 diabetes was done in collaboration with All India Institute of Medical Sciences (AIIMS), New Delhi, India. Diabetes is the most frequently seen chronic disease in MTK clinics. Ancient texts of Tibetan Medicine outline the successful management of diabetes. However, there is a paucity of systematic research studies using modern scientific tools to evaluate the efficacy of Tibetan Medicine. Therefore, we undertook a study to assess the efficacy of Tibetan Medicine when combined with a diet & exercise regimen compared with a diet & exercise regimen alone in controlling the blood glucose and glycated hemoglobin (GHb) in newly diagnosed or untreated type 2 diabetes. A total of newly diagnosed or untreated type 2 diabetic patients, who were eligible and consented to participate in the trial, were recruited from two branch clinics of MTK.

At each centre, all of the 200 subjects, 136 men and 64 women, were randomised into two groups, the treatment group and the control group. Fasting blood glucose levels decreased by $12.2 \pm 30.5\%$ at 12 weeks and by $23.4 \pm 20.0\%$ at 24 weeks in the treatment group as compared with 7.4 ± 30 and $6.4 \pm 27.7\%$ in the control group. The PPG measurement was significantly lower in the treatment group at 12 and 24 weeks (decrease of 18.0 ± 31.2 and $23.4 \pm 27.1\%$) compared with the control group (decrease of 5.5 ± 32.9 and $10.0 \pm 41.2\%$). At 12 weeks, the percentage decrease in GHb levels was $1.9 \pm$

35.8% in the control group compared with $17.5 \pm 31.3\%$ in the treatment group. At 24 weeks, the decrease in GHb was $21.8 \pm 30.1\%$ in the treatment group compared with $6.7 \pm 29.3\%$ in the control group. There was no significant change in body weight, blood pressure, or serum lipids in either group.

The preliminary trial has shown a positive effect of the use of Tibetan Medicine in management of diabetes mellitus. Further evaluation of the Tibetan Medicine in treating patients with DM will require blinded placebo controlled trails, and comparison of this system with other oral hypoglycemic agents.

The American Diabetes Association, Inc, published the study as an observation letter in Diabetes Care 24: 176-177, 2001. The study's full report was published by Men-Tsee-Khang and presented to His Holiness the Dalai Lama during His visit to MTK on 7th Dec' 2000.

Diabetes Survey: A descriptive study was done to study the prevalence of diabetes mellitus in Tibetan settlements in South India in December 1997. There has been no reported study of DM among the Tibetan population. In this study, the crude prevalence rate of DM was 4.3%. DM can be considered to be a significant problem in this migrant Tibetan population. One also needs to take note of very high prevalence of hypertension in the Tibetan population. A note should also be made of a possibly high occurrence of cerebrovascular disease. Separate studies on **hypertension and stroke** are needed to confirm their high prevalence.

iii) Cancer Study: Cancer is one of the chronic diseases Tibetan Medicine has shown some positive effect depending on the stage of the disease. The need to design a clinical study was felt for a long time and during a meeting on cancer in 1996, it was decided to commence with a base-line study before launching on a clinical study. The objectives of this study was to identify the type of cancer Tibetan Medicine is most effective; the stages of cancer; alleviating the symptoms; improving the quality of life & life span, and to specify the particular Tibetan drugs for cancer. The base-line study went through 1998 - 2001 registering 638 Ca patients from 15 MTK's branch clinics. The study showed marked improvement in alleviating the symptoms; controlling the disease; improving the quality of life physically & mentally and pre-longing the life span. 9 patients were reported completely cured.

Based on this preliminary study, a clinical study on ovarian cancer was designed in collaboration with All India Institute of Medical Sciences (AIIMS), New Delhi. The study proposal has been submitted to AIIMS's Ethical committee. The study will be commenced once it is accept by the Ethical committee.

iv) Toxicity Study (Use of Heavy Metal in Tibetan Medicine): Heavy metals (gold, silver, copper, mercury, etc,) are part of gems and minerals, which forms 5-7% of medicinal substances used in Tibetan Medicine. They are purified applying sophisticated method, which is one of the unique feature in Tibetan Medicine. There have been numerous speculations over the use of heavy metals in Tibetan Medicine over last few years. MTK has taken such speculations in her stride and had decided to design a toxicity study to authenticate this unique method of formulating purified mercury therapeutically.

The study was planned as an open, retrospective, controlled pilot study, constituting an initial feasibility stage of a larger, future prospective study. The study was done in collaboration with Natural Medicine Research Unit, Hadassah Medical Organization, Jerusalem, Israel; Delek Hospital, Dharamsala, India; Dept. of Toxicology, Sheba Medical Center Tel Aviv, Israel and Dept. of Chemistry, University of Liverpool, Liverpool, UK.

Study participants were recruited from the outpatients department of the Delek Hospital where Western medicine is practiced. The volunteers who agreed to act as controls were recruited from the personnel working at MTK, known to be in good health. A total of 11 participants (9 patients, 2 controls) were recruited into the study. Each participant were examined and questioned by Western trained physicians at the Delek Hospital for any physical symptoms that include cardiovascular evaluation and a neurological examination (tremor, peripheral sensory neuropathy, motor neuropathy and tunnel vision). An oral examination evaluated the presence of loose teeth and dental fillings. Blood and urine sample was taken for evaluation in the Delek Hospital laboratory.

For analysis of whole blood and urine for mercury levels, the samples were transported to Israel in ice pack through air courier. They were delivered by hand to the Dept. of toxicology, Sheba Medical Center, Tel Aviv, Israel.

Results: A total of 11 patients were evaluated for the study. They included 6 patients in Group I (mercury containing Tibetan Medicine as Precious pills), 3 patients in Group II (non-mercury containing Tibetan Medicine) and 2 participants in Group III (Controls). General and neurological examination were normal in group I & II. The mean serum level of liver and renal functions tests were within the normal clinical range and did not differ significantly between treatment and control groups. Evaluation of urine samples for red blood cells and protein were negative in all 3 groups. **Serum mercury levels** were non-detectable in all patients in Groups I, II & III. **Mean urinary mercury levels** were under normal range.

Although the study was small representing only the feasibility stage of a larger, future prospective study, nevertheless the results are of interest. It demonstrate for the first time that the patients ingesting high levels of mercury present in certain Tibetan Medicine, over a pre-longed period of time, displayed little evidence of toxicity. The current study, although performed on only a small cohort of patients tend to support the hypothesis that a pre-longed intake of the “purified” form of mercury, known in Tibetan Medicine as Tsothel is relatively non-toxic. These initials results are of particular interest in view of the growing popularity of Tibetan Medicine in the West, however there is no doubt that further research needs to be performed.

v) Cell Line Study: The purpose of this study was to explore the possible stimulating effects of the Tibetan Medicine called Pokar 10 in two cell types that have been stressed in an impoverished medium over 5 days. This study was carried out in May 2004 in collaboration with Tissue Culture laboratory at Portland Community College, Portland, Oregon, USA. Both cell types were fibroblasts, fast growing connective tissue cells secreting an extra-cellular matrix rich in collagen and other macromolecules. The Tibetan Medicine Pokar 10 is often given for the treatment of joint inflammation/pain and skin diseases.

The cell submitted to concentrations of Tibetan Medicine were noticed to be growing “extensions” to their cytoplasmic material, appearing to reach specifically for the Tibetan compound, grabbing and engulfing bit of it. This movement in the direction of the Tibetan Medicine can be referred to as a **positive chemotactic response**. Further testing would be required to continue documenting the earlier responses of the fibroblast cells, and also to attempt to understand and explain the physiological mechanisms by which the Tibetan Medicine was able to beneficially affect the culture cell line. The full report is published in sMan-rTsis Journal, an official Men-Tsee-Khang journal.

vi) Hepatitis B Study: A clinical study on Hepatitis B was started from April 2004 to December 2004. It was an Open Randomized Control Single Centre Study. After obtaining patient’s consent, 50 patients were selected following WHO selection criteria. The patients were grouped into two arms with one arm getting **Specific Tibetan Medicine** for Hep’ B and another arm getting **Traditional Tibetan Medicine** for Hep’ B. The primary objective was to evaluate the efficacy of Tibetan Medicine in treating Chronic Hepatitis B patient.

The result didn’t display any conversion from positive to negative but it certainly showed significant improvement in **Liver Function Test (LFT)** and alleviating related symptoms. The paper is published in sMan-rTsis Journal, an official medical journal of Men-Tsee-Khang.

vii) Hypertension Survey: The findings of high rate of hypertension and stroke during the diabetes survey in Tibetan settlements in South India in December 1997 lead to this study. It is a descriptive study that was designed to study the prevalence of hypertension in exile Tibetan community. The whole Tibetan community in Northern India (except Dalhousie) has been covered screening some 6000 people. Along with screening people for hypertension, a specially designed form for each participant is filled by the field-investigating doctor. People are educated about the cause and preventive measurement of hypertension and the hypertensive people were advised accordingly in managing their blood pressure. The data will be analysed once the particular region is covered up.

viii) Public Health Intervention: Public Health Intervention is employed as one of the other means of improving the health care system in community by this deptt. Couples of projects that are on the floor are:

Diet Book: Diet is considered as one of the important tools in sustaining health and treating disease in Tibetan Medicine. This project comprises series of book on every aspect of diet from grains, vegetables and fruits -to- different forms of drinks. The first volume of this book series has been published both in Tibetan and English Language.

Health Education: In order to reach masses, a special program of educating common people about the health and diseases are initiated by using different media platforms like radio, local newspaper, electronic media and by delivering a public talk.

b) Materia Medica Department

The main objective of this department is aimed at publishing works on Six Volumes of proper identification of Tibetan Medicinal plants and also to direct and control the quality of the raw materials used in the production of pills and herbal compounds. The quality

control management is carried out through both traditional and modern quality assurance while keeping optimum preference on safety measurement.

This department also publishes books on Tibetan materia medica. Some of the books published are:

- The first Vol. Of The “Clear Mirror of Tibetan Medical Paintings”, 1999
- The Second Vol: of The “Clear Mirror of Tibetan Medical Paintings”, to be published in 2007
- “A key Dictionary of Synonyms on Tibetan Materia Medica”, to be published in 1998
- The “Tibetan Medicinal Plants”, 2001. A collaborative work between Men-Tsee-Khang and Institute of Pharmacognosy and the Institute of Botany—University of Agricultural Sciences, University of Vienna, Austria. For more visit: www.medpharm.de OR www.crcpress.com.
- **The “ Traditional Methods of Compounding of All Eight categories of Materia Medica”, 2005**

Herbarium

In 1990 this Dept established new Herbarium for the collection of Tibetan Medicinal plants specimens from Western Himalayas, Sikkim, Nepal and Tropical India. The Herbarium hoards collections of many Tibetan Medicinal Plants collected during field explorations, which was conducted every year.

Quality Control

The medicinal plants identified through traditional systems are also analyzed through the Modern quality control analytical techniques. The aim of such stringent quality control is:

Documentation on quality as a result of GMP including quality control:

- The qualitative and quantities composition of all ingredients.
- The manufacturing process
- Quality control of the starting material
- Quality control of the intermediates
- Quality control of the finished product
- Stability testing

Cultivation of Medicinal Plants

From the beginning of 1998, this institute has taken initiatives in the conservation of medicinal plants through cultivation. The cultivation are done in two different places – a small medicinal plants garden in Dharamsala, where trials on cultivation are being carried and another five acre land in Sonada, Darjeeling, where plants are propagated in a larger scale at an altitude of 2143 meters (approx. 7280 ft).

Few plants, particularly in the red list data of TRAFFIC INDIA and WWF, received special attention and care. This includes plants such as *Arctium lappa*, *Inula racemosa*,

Meconopsis sp. & *Saussurea lappa* etc. We achieved satisfactory results over the years on all the above-mentioned plants.

We resort to natural organic farming techniques in conservation of medicinal plants with emphasis laid on in-situ conservation. These steps are never omitted during the cultivation practices. Utilization of chemical fertilizers may increase the quantity in the production of plants for a certain proximate period, but it may bring undesirable side effects later. On the other hand, if plants are cultivated through organic farming in its own natural environment, it will surely be able to absorb the required nutrients for its growth and acquire higher therapeutic properties.

Upon request from the faculty members of the institute, short training courses on cultivation and conservation, based mainly on the traditional knowledge are being imparted at the center and at other institutional areas.

Botanical Paintings

The botanical painting was done to show the true characters of the particular medicinal plants.

Traditional Medicinal Paintings

In the Tibetan Medical System, there are total of 79 medical paintings (Thangkas). The origination of these paintings goes back to Seventeenth century AD, which were painted by renowned Thangka painters of that time who were summoned by Desi Sangye Gyatso. These Thangkas of Tibetan medicine hold great historical legacy and serves as an important source of reference for students, researchers and Tibetan physicians. Likewise, the traditional illustrations of the high altitude medicinal plants in these Thangkas help in preserving the knowledge of identification of medicinal plants and to conduct studies and research. Currently the traditional Thangka painters of the department are supervised to produce exact replica of the complete set of the medical paintings.

Museum

MTK's museum was inaugurated by H.H. the Dalai Lama on 23rd March 1997. The purpose of setting up this museum is to preserve the profound Tibetan medical system and fulfill the wishes of students, scholars and researchers from all over the world. This museum encompasses old and new paintings, plant paintings, plant photographs as well as information related to the origination and contents of Tibetan medicine and astro. Sciences. It also displays various instruments related to these two sciences and numerous samples of herbs, plants, woods, rocks, salts, minerals, gems and precious minerals with vivid captions and their medicinal usage.

c) Herbal Product Research Department (HPRD)

This department works in preserving and promoting the use of natural herbs for the benefit of mankind. It presents and creates awareness among the common people about the use of natural herbal products. All the products are prepared with utmost care and respect for the environment. Each new product is thoroughly researched blending modern

methods with ancient Tibetan Tradition and natural ingredients so as to reach the highest level of quality and standard.

HPRD is producing some 30 different herbal products right now under the brand name of “SORIG”. SORIG, the trademark used for the Tibetan Herbal products produced by Tibetan Medical & Astro. Institute, can be literally translated as “The Science of Healing”.

4. Sorig Literary Research Department

The department was initially established under the name of Documentation & Publication department on May 1st 1995 with two staffs. Owing to the need and importance of the department, Men-Tsee-Khang administration gradually increased the staff and replaced the name from Documentation and Publication to Sorig Literary Research Department.

Since its inception, the department has published many books relating to: research work, articles and reproduction of old medical text into book format to save the original texts from going extinction. The department also undertakes the sales of all the publications of Traditional Tibetan Medicine and Astrology.

In addition to research on Tibetan Medicine, the department is engaged in following other important works:

- Analytical research and documentation of various medical texts such as Indian Ayurveda, Unani, Allopathic medicine, etc.
- Analyses on Tibetan Medical Treatises written both in Tibet and in exile.
- Collection of articles written on the practices of Tibetan Medicine that are practicable and effective in treatment.
- Archiving of all the presentations and articles presented during the workshop and seminar on Tibetan Medicine.
- Acquiring old and rare texts from the places such as Ladakh, Garsha, Lahul, Spiti and in other Trans-Himalayan regions where Tibetan Tradition is followed.

Research on articles and paper related to Tibetan Medicine and if required, are published in a book form

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