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Concepts of *Shalya Tantra* in *Kampo* - Japanese system of Traditional Medicine

Dr. D. Gururaja

Professor, Department of Shalya Tantra, Muniyal Institute of Ayurveda Medical Sciences, Manipal, Udupi, Karnataka, INDIA.

ABSTRACT

History of medicine is very fascinating. We can find many traditional systems of medicine developed in different regions and served humans for many centuries before the development of modern medicine. The system developed in India is known as Ayurveda and system developed in Japan is known as Kampo. We can find many similarities in the basic concepts between these systems. Apart from use of internal medicines both the systems have used sharp instruments, Fire etc in the management. Treatment like excision, Incision etc using different sharp instruments comes under a separate branch as Shalya tantra in Ayurveda but there is no independent branch for surgery in Kampo system. There are many similarities in surgical concepts between these two systems. There is a need to develop universal system of alternate medicine by adopting different concepts from these traditional systems.

Key words: *Shalya Tantra, Kampo, Agnikarma, Moxibustion, Surgical Instruments, Blood Letting.*

INTRODUCTION

History of medicine is very fascinating. Civilizations around the world have collection of remedies for their illness. Traditional Treatment systems developed in different regions based on geographical conditions, availability of rich herbal resources, understanding of human body and disease etc. Some systems advanced well, while other systems remained primitive. One of the traditional system which developed in India is Known as Ayurveda. Similarly, the system which developed in Japan is known as Kampo system of medicine.

Kampo is the unique system of Traditional medicine developed in Japan from Chinese origin. The word *Kampo* is a compound of two words *Kan (Han)* the old name for the Han dynasty of China and *Ho* meaning medicine or way of treatment. Although rooted in Chinese tradition, *Kampo* medicine is not the same as Traditional Chinese Medicine (TCM). TCM emphasizes the traditional concepts of East Asian natural philosophy, such as *Yin* and *Yang* and the theory of the five elements (Fire, Earth, Metal, Water and Wood). Japanese *Kampo* favours diagnostic methods that directly relate the symptoms to the therapy, by passing speculative concepts. The therapeutic aim is to relieve symptoms and to restore harmony in bodily functions. For the determination of the appropriate herbal prescription, the physician carries out a thorough investigation of the complaints and symptoms of the patient, including body temperature, examining sensation, weakness or sweating along with physical examination includes abdominal palpation, tongue inspection and pulse diagnosis. This provides additional information concerning the state of the disease, amount and distribution of *Ki* (vital energy), *Ketsu* (blood) and *Sui* (body fluid). The subjective complaints and the symptoms observed by

Address for correspondence:

Dr. D. Gururaja

Professor, Department of Shalya Tantra, Muniyal Institute of Ayurveda Medical Sciences, Manipal, Udupi, Karnataka, India.

E-mail: gurushalya@yahoo.co.in

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the physician are combined to an individual symptom profile as *Kampo* diagnosis (*Sho*), which leads to the selection of the appropriate herbal decoctions. Apart from herbal medicines Acupuncture, Moxibustion and Bloodletting were also used to correct the flow of energy.^[1]

Ayurveda is the traditional system of medicine which developed in India. *Tridosha* (*Vata*, *Pitta* and *Kapha*) are the basic humours of the body which is made up of five basic elements (Earth, Water, Fire, Air and Space). *Prana* is the vital energy which circulates in the body. Any imbalance in *Tridosha* will lead to the manifestation of disease. Patients are examined by asking questions (*Prashna*), By Inspection (*Darshana*) and by Palpation (*Sparsha*). Examination of Pulse, Examination of stool and urine should be conducted to make a diagnosis. Description regarding different types of herbs, their qualities and therapeutic uses are explained in detail in Ayurveda Tests. Based on the qualities of the herbs different preparations are explained which can be used in treatment. *Panchakarma* therapy and Surgical treatments are the speciality treatment options in Ayurveda. There are many similarities between Ayurveda and *Kampo* in basic concepts and treatment. Some of the similarities in the concepts is listed in Table 1.

Table 1: Similarities in Basic concepts between Ayurveda and Kampo.

Concepts	Ayurveda	Kampo
Vital energy	<i>Prana</i>	<i>Qi</i> or <i>Chi</i>
Types of energy	<i>Soma</i> or Moon (Female, Cold) and <i>Surya</i> or Sun (Male, Hot)	<i>Yin</i> (Female, Cold) and <i>Yang</i> (Male, Hot)
Five elements	<i>Akasha</i> (Space), <i>Vaayu</i> (Air), <i>Agni</i> (Fire), <i>Jala</i> (Water), <i>Pruthvi</i> (Earth)	Fire, Earth, Metal, Water, Wood
Routes of energy flow	<i>Srotas</i> or <i>Nadi</i>	<i>Jing Luo</i> (Jing=path, Luo

		connection) or Meridians
Tastes	Six: Sweet, Soar, Salt, Spicy, Bitter, Astringent	Five: Sour, Bitter, Sweet, Spicy, Salty.
Vital points	<i>Marma</i> points	Acupuncture points
Unit of Measurement	<i>Angula Pramana</i>	<i>t-sun</i> : breadth of the thumb at its interphalangeal joint.
Treatment concept	<i>Santarpana</i> and <i>Apatarpana</i>	Tonification and Dispersion

Knowledge of Ayurveda was so vast that it was divided into eight branches. Out of these branches *Shalya Tantra* deals with the surgical management. *Sushruta Samhita* is the treatise related to *Shalya Tantra*. In *Shalya Tantra* detailed description regarding use of different surgical instrument, surgical procedures, therapeutic use of fire and alkalis, management of fractures and ulcers are explained. In *Kampo* system, separate branch for surgery is not mentioned, but explanation regarding many Para surgical procedures are present.

Importance of Blood in Ayurveda and Kampo

Importance was given to Blood by both Ayurveda and *Kampo* in the manifestation of a disease and management. *Acharya Sushruta* considers blood as Fourth *Dosha* and calls it as *Jeeva* or Life.^[2] Blood plays important role in the manifestation as well as in the management of a disease. Bloodletting is considered as *Ardha Chikitsa* (half of the treatment) in the management of a disease. *Kampo* says *Ki* (Vital energy) governs blood and that blood is the mother of *Ki*. Blood provides the foundation for the creation of energy in the body. *Kampo* also says in same tone about the importance of bloodletting. *Sushruta* considers bloodletting as the last option in many conditions after oral medicines and *Panchakarma* procedures but in some conditions bloodletting forms

the first line of management. *Kampo* considers bloodletting as first line of management which gives foundation for other forms of treatment.

Bloodletting in *Shalya Tantra* and *Kampo*

Bloodletting is called as *Raktamokshana* (*Rakta* = blood, *Mokshana* = Letting) in *Shalya Tantra*. *Raktamokshana* is classified as;

1. *Shastrakruta*: Using sharp instruments like blades or Needles.
2. *Ashastrakruta*: Without using sharp instruments.^[3]

Shastrakruta blood letting is of two types i.e. *Pracchana* and *Siravyadha*. In *Pracchana*, small superficial cuts or incisions are made over the affected area and blood is allowed to flow. In *Siravyadha* superficial veins are punctured to draw the blood. *Ashastrakruta* includes use of Leech as in Hirudotherapy and use of vacuum pots like *Alabu* (dried bottle guard) to give extra suction force to suck the blood after giving small skin incisions. Presently instead of *alabu*, vacuum cups are being used. Selection of suitable method of bloodletting depends on condition of the patient, *Dosha* involved and state of vitiation of blood.

Kampo explains two types of bloodletting methods as *Shiraku* and *Shaketsu*. *Shiraku* is a superficial type of bloodletting, where small quantity or few drops of blood are removed. *Shaketsu* is deeper method and more quantity of blood is drawn. Superficial bloodletting is again classified into *Sairakushiraku*, *Mattakushiraku* and *Ranshi ho*.

1. *Sairaku Shiraku*: It is practiced by piercing and draining out small quantity of blood from very small superficial dilated capillaries. Usually from capillary spider naevi. Capillary spiders are pierced using lancets later squeezed between the fingers to draw appropriate amount of blood. Vacuum cups can also be applied on the pierced site to suck blood.
2. *Mattaku Shiraku*: Blood is drawn by piercing on both sides of the nail bed using lancet or some

special instruments and later squeezed. One to two drops of blood are drawn. These points are known as Jing well points in acupuncture and used in emergency conditions like heart attack or Cerebro Vascular Accidents. (Photo 1)



Photo 1: Mattaku Shiraku

3. *Ranshi ho*: Small cuts are made on the skin. Later either squeezed or Vacuum cups are applied. Cups are removed as the bleeding stops spontaneously.

Shaketsu or Deep blood letting is similar to Phlebotomy. Needles or syringe are used to draw the blood. Quantity of the blood drawn varies from few drops to 100ml or more depending on the method. Leech application was also known but presently it is not practiced. Bloodletting over the scalp by making multiple small pricks is practiced using special instrument or needle (Photo 2) for cases like *alopecia areata* which is similar to *Pracchana* and instrument resembles *Trikurchaka* of Ayurveda.

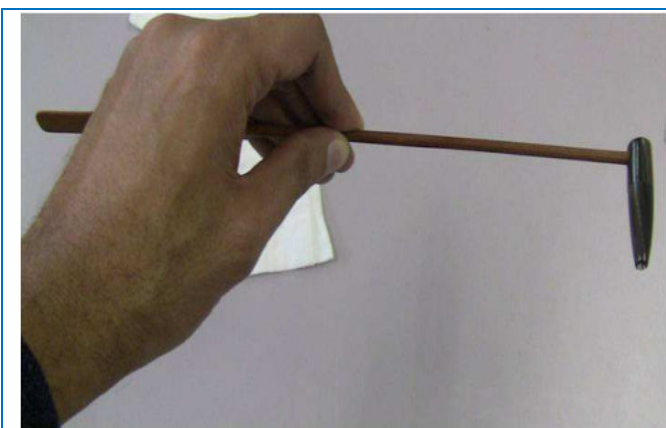


Photo 2: Instrument used to give controlled pricks over scalp or affected areas

Surgical Instruments in Shalya Tantra and Kampo

Acharya Sushruta mentions 101 types of blunt surgical instrument which are called as *Yantra* and 20 Sharp surgical instruments which are known as *Shastra*.^[4] *Sushruta* explains about eight types of surgical procedures and detail description about pre-operative, operative and post-operative management are also available. Unfortunately, traditional surgical instruments according to the description are not available or presently are not in use. Today modern surgical instruments are used by Ayurveda surgeons. In *Kampo* system such systemic description about instruments are not available but many surgical instruments are in practice. Surgical instrument box containing different instruments which are used for acupuncture and other surgeries (Photo 3) still exists. *Kampo* practitioners were practicing some of the surgeries like haemorrhoidectomy but later as government restricted *Kampo* practitioners^[5] from performing surgeries, only acupuncture was practiced and advanced with invention of finer needles. In *Shalya Tantra* out of eight types of surgical procedures mentioned, *Vyadhana* (piercing) is included but concept like acupuncture did not develop.



Photo 3: Surgical instrument box

Therapeutic cauterization in Shalya Tantra and Kampo

In Ayurveda heat is utilized therapeutically in two forms. Indirectly heat is used to warm up an area and made to sweat, it is known as *Swedana*. In *Swedana* direct fire is not used and temperature also

maintained below the burning point. If heat or fire used directly to burn a part then it is known as *Agnikarma*.^[6] *Agnikarma* is performed over the diseased site to burn the unhealthy tissues like in case of corn or wart etc. or to stop bleeding by cauterizing the blood vessels. Fire is also used to burn the skin away from the diseased site in the management of pain and musculoskeletal conditions. Metallic rods, Heated stones, Honey and Hot oils are used to burn the tissues. *Agnikarma* is classified based on the material used for burning as;

1. **Rukshadagha:** Here heated metallic rods, stones, dried faeces of goat and arrow are used to burn the area. It is used to burn the skin and muscles.
2. **Taila dagdha or Snigdhadagdha:** where hot oils or honey are used to burn the area. It is mainly used to burn the blood vessels and tendons.

Based on the depth of the burn it can be classified as

- a. **Twak dagdha:** Skin is burnt superficially
- b. **Maamsadagdha:** Deep burn up to muscle plane.

Skin is burnt by using above instruments in Circular pattern, Multiple dots, Linear pattern or in a wide area. After *Agnikarma* one has to look for the signs of proper burning which has been explained in texts. *Agnikarma* is considered as superior to other line of management as the diseases which are treated with *Agnikarma* will not reoccur. Present day different types are *Agnikarma Shalaka* are being used to perform *Agnikarma* (Photo 4).



Photo 4: *Agnikarma Shalaka*

In *Kampo* system use of heat or fire in treatment is known as *Moxibustion*. It is done using *Moxa* plant (*Artemisia moxa* or *A.vulgaris*). *Moxibustion* was introduced in the field of acupuncture during 12 century AD. Concepts are similar to Traditional Chinese medicine. Tonification and Dispersion are the fundamental concept treatment as *Santarpana* and *Apatarpana* in Ayurveda. Where ever there is a deficiency of the Ki or energy tonification is practiced. *Moxibustion* is a way of tonification of the energy. Usually Tonification comes first or before dispersion. A chronic disease causes depletion of the energy and *moxibustion* is preferred. Illnesses arising from the internal causes, tonification techniques are used to treat it. While palpating if there is an area of depression on the body surface it means there is deficiency of the energy at that point and here tonification or *moxibustion* is indicated.

Moxa is prepared by dried leaves of *Artemisia vulgaris*. It is powdered and sand particles are removed. The powder thus prepared appears as yellowish and soft textured wool like and is known as *moxa wool*. Small quantity of wool is mixed with *moxa* powder to facilitate burning. Softer and high-quality powders are prepared by keeping the dried leaves in running water for long duration, even for years and later dried and powdered. It is stored in dry containers or *Moxa* box. *Moxa* powder is used in the form of *Moxa* cones and *moxa* roll in *moxibustion*. (Photo 5)



Photo 5: Moxa box containing powders of different fineness

Moxibustion therapy^[7] on the basis of treatment is divided into two categories.

1. Direct *moxibustion*
2. Indirect *moxibustion*.

1. Direct *moxibustion*: In this method the *moxa* is kept over the selected point on the body and burnt. Direct *moxibustion* is of two types.

- i. Scarring *moxibustion* and
- ii. Non scarring *moxibustion*.

i) Scarring *moxibustion*: Here *moxa* wool is kept directly over the body part and ignited until the skin is burnt. As the term scarring indicates the burning of skin leading to formation of scar. Types of Scarring *moxibustion* are

- a. Penetrating *moxibustion*
- b. Cautery *moxibustion*
- c. Suppurative *moxibustion*

a) Penetrating *moxibustion*: In this form, small cones of high quality *moxa* are burned on the skin three or more times depending on the condition. It causes blisters but the area is very small and the burn is not deep. (Photo 6)



Photo 6: Penetrating Moxibustion

b) Cautery *moxibustion*: In this method *moxa* is burnt directly on the skin for the purpose of burning of unwanted tissues such as corns and warts etc. Many cones of *moxa* are burned consecutively.

c) Suppurative moxibustion: Burning of a large cone of the moxa for the purpose of formation of large blisters and cause a localized inflammation subsequently draining the pus. It is type of purification.

ii). Non scarring moxibustion

a) Warming moxibustion: Here burning moxa sticks are held close to the skin to heat the areas.(Photo 7)

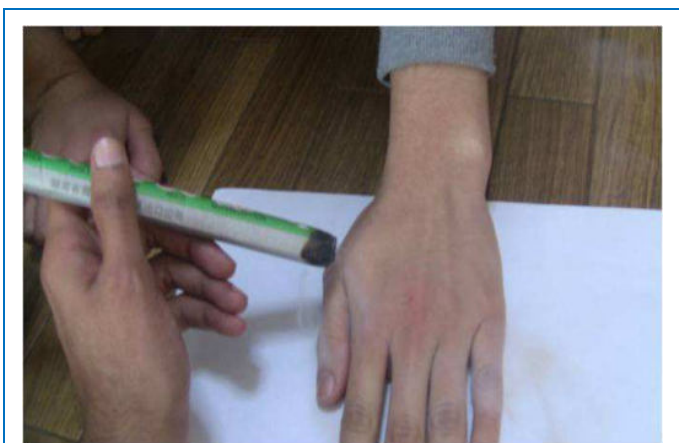


Photo 7: Warming Moxibustion using Moxa sticks.

b) Heat sensing moxibustion: In this method, large cone of moxa is burnt directly on the skin and removed as soon as the heat is felt. This form of moxibustion is applied consecutively on the same point up to five times. (Photo 8)

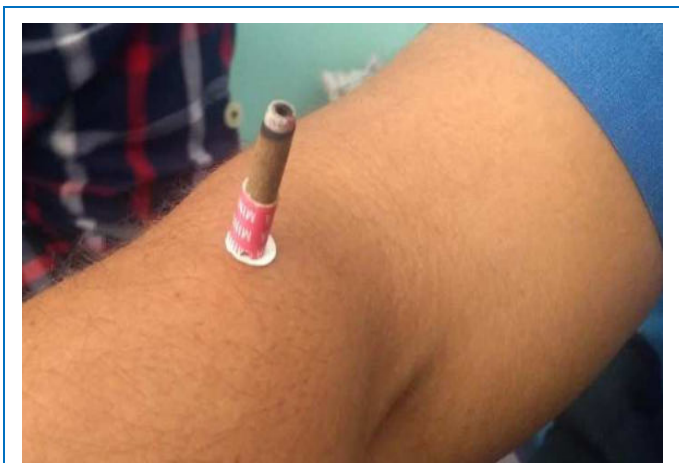


Photo 8: Heat sensing Moxibustion

2. Indirect moxibustion

Here moxa is not burnt directly on the skin instead something is kept in between the skin and the moxa.

These are called as buffers. Slices of ginger, onion, garlic, soya cake or salt are used as buffers. These buffers not only reduce the heat but also imbibe additional therapeutic benefits. (Photo 9)



Photo 9: Indirect Moxibustion using garlic slices as buffers

Moxa ironing: In this method moxa powder is kept inside the moxa iron and ignited. Moxa iron is then kept over the area.

Non scarring and Indirect moxibustion techniques are similar to *Swedana* where fire is not used directly but heat is utilized in the treatment.

Moxa acupuncture: Here small ball of moxa is kept and burnt on the head of the inserted acupuncture needle. (Photo 10)



Photo 10: Mox acupuncture

DISCUSSION

Every medical system existing in this world was developed with a single moto of giving relief from sufferings. When it was not achieved through the

medicines, many other unconventional methods were tried and got success. Some branches give important to these interventional methods like cutting, burning or blood letting etc. *Shalya Tantra* is the branch of Ayurveda which deals with the injuries, utilizes fire, caustic substances and different instruments in treatment to give quick relief. Similar approach was seen even in *Kampo*, Japanese system of medicine, but there is no separate branch for surgery. We can find similarities between these two systems in basic concepts of understanding a disease and its management. Many para-surgical procedures were present in *Kampo* system. Bloodletting from the nail bed region (*Jing Well Points*) are in practice for cases of acute stroke and other emergency conditions is a unique treatment in *Kampo*. Bloodletting was also practiced in skin diseases, hair loss conditions. Even though traditional surgery is not in practice presently but surgical instrument box and different set of traditional instruments used by *Kampo* practitioners are similar to *Yantra* and *Shastra* explained in *Ayurveda*. About 80 types of instruments are present in traditional instrument box with different types of blades, probes, needles along with separate paediatric instrument set. In *Ayurveda*, specialists of *Shalya Tantra* use modern surgical instruments and compare it with *Ayurvedic* descriptions. Few classical instruments are in use like *Agnikarmashalaka*. We could not find classical surgical instruments and instrument box according to *Ayurveda* descriptions which were used or are still in use. There is need to develop classical instruments and bring them back into the practice.

In *Shalya Tantra* detailed description about vital *Marma* points, points for bloodletting and cauterization points in different diseases are stated which are similar to *meridian* points of acupuncture but method like piercing needles into these points as in acupuncture was not developed. Important has been given to protect the *marma* points from any kind of damage during surgical procedures which is opposite to the concept of acupuncture. But in acupuncture it is a controlled puncture without injuring the structures at *marma*, to correct the

normal flow of energy. Intervention on *marma* points effectively in the management is lacking or lost in *Ayurveda*. It is restricted only to manipulation. Apart of understanding *Marma* points there is a need to understand the concept of *Sira*, *Dhamani*, *Srotas* comparing it with meridians. This may put some light on the practice of acupuncture or *Vyadhana Karma* according to *Shalya Tantra*. Further research is needed about existence of acupuncture practice or *Vyadhana* in India. Acupuncture might have in experimental stage or not at all in practice in India, so it has failed to get a place in classical texts as *Agnikarma*, *Jalauka* and *Kshara* which were later included as independent chapters in *Sushruta Samhita*.

Indirect use of heat is explained under *Swedana*. As in *Swedana* chances of burn injury to the patient is less it was included in *Panchakarma*. Direct use of fire to burn the skin, unhealthy tissues or to stop bleeding is included under *Shalya* speciality. In *kampo* system use of all kinds of heat comes under *Moxibustion*. Direct scarring moxibustion is similar to *Agnikarma* as skin or tissues are burnt. Non-scarring *moxibustion* and Indirect *moxibustion* are similar to *Swedana* but unlike *swedana* where heat is applied over a wide area, in *moxibustion* heat is applied over specific area or over acupuncture points. Such concepts of specific application of heat over points can be adopted and tried on *Marma* points in the management. Use of modern technology to develop user friendly, patient friendly and safe acupuncture needles, Moxa sticks and Moxa pellets can be adopted by *Ayurveda* and *Shalya Tantra* to advance technically.

CONCLUSION

Even though *Ayurveda* and *Kampo* traditional systems developed in different regions, there are many similarities in basic concepts and approach. By incorporating and adopting new concepts from other systems, we can develop and strengthen *Ayurveda* and also build a universal system of alternative medicine.

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