FEATURE

CHU TAG
THE TIBETAN ART OF URINE ANALYSIS

Patrice Richard

Going beyond what is visible... Discovering the inner secrets of our universe... Since the existence of humankind, one has always been fascinated by these subjects, trying to understand the mysteries of life, death, health, and disease. It is common belief that excretions of the body: blood, sputum, vomiting, stool, and of course, urine, could contain hidden messages from the body. Therefore, by examining someone's urine, for example, it should reveal information about that person's state of health. This statement has been well-known for centuries, and urinalysis used to be a very important method of diagnostic.

In the subsequent Tantra of Tibetan medicine, written in the 12th century, urine is described as a mirror clearly reflecting the state of health, while in the Western medieval view, observing urine was like "Reading human nature through a glass."

Uroscopy as a general diagnostic tool was widely spread in the West; so important that the urine flask was the symbol of medicine until it was changed to the caduceus during the 17th century. Despite its importance historically, uroscopy has been progressively reduced to an occasional method to confirm urogenital tract pathologies.

HISTORY

We now know that Sumerian doctors recognized that urine could be affected by diseases by the discovery in Iraq of Sumerian and Babylonian clay tablets dated at least 6000 years ago with medical assessments on urine carved in.[1]

During the first millennium BCE, the Himalayan highlands around Mount Kailash saw the flourishing of the Shang Shung Kingdom, the cradle of the Bön religion. The Bönpo, followers of the Bön tradition, being versed in astrology and predictions made the observation of urine a widespread divination practice.

In the 7th century CE, the 33rd King of Tibet, Songtsen Gampo (Srong-btsan sgam-po, 617-698 CE), conquered Shang Shung and thereby extending his influence to Nepal and western China. Shang Shung became Tibetan; its culture and practices were assimilated by the winner. Songtsen Gampo invited physicians from India (Vajradhvaja), China (Hen-weng Hang-de) and Persia (Galenos) to Shang Shung for collaboration and cultural exchange. From then on, Tibet assimilated certain aspects of their neighbours' medical systems, such as pulse reading from China. In addition to Ayurveda and Chinese medicine, Sowa Rigpa was also influenced by Greek, Byzantine and Arabic medicine. However, it is interesting to note that urinalysis is not found as a general diagnostic tool in either classical Ayurveda or classical Chinese medicine.

By the 8th century, the famous Yuthok Yonten Gonpo the older (708-833), father of Tibetan medicine and founder of Tanadug Medical College, wrote the Four Tantras of medicine. Meanwhile in the West, Theophilus Protospatharius, a Byzantine physician at the court of Emperor Heraclius, published the first Greek-language medical work devoted exclusively to urine: Περι Ουρον (Peri Ouron). Translated into Latin under the title "De Urinis," it described a whole range of colours that can be observed in the urine. Theophilus was also the first known to heat urine, thus inventing the first laboratory method, now known as a way to crystallize proteins. Theophilus is, therefore, considered to be a pathfinder of urology. His book influenced the whole Middle Ages, resulting in uroscopy being the ultimate diagnostic tool of choice.

It became so significant that physicians who failed the urine test were sentenced to public caning by the 1090 Jerusalem Law[2]!

During the 12th century, Yuthok Yonten Gonpo the younger reorganised and rewrote the Four Tantras that had been previously introduced to Tibet between the 7th and 8th centuries. This version is still in use nowadays. Each one of the Four Tantras includes considerations on urine. It is defined in the First Tantra as one of the three excretions of the body. Uroscopy is first mentioned as a diagnostic method and some general characteristics are given in the chapter on diagnosis. The Second Tantra (Explanatory Tantra) gives some indications on the processes of digestion and urine formation as well as some pathological signs in urine (colour, quantity, vapour, odour, and bubbles). The method of urinalysis is then fully detailed in the Fourth Tantra (Final Tantra).

Another root text of Sowa Rigpa is called, "The Medical Method of the King of the Moon" or Sman dpyad zla ba'i rgyal po ("Soma Radza"), sometimes attributed to Nagarjuna. According to the French scientist Fernand Meyer3, the archaisms present in this text tend to prove that it predates the Gyu Shi in its known current version of Yuthok the younger and would probably have been written between the 8th and 12th centuries. Soma Radza has five chapters concerning urine. A divination style of urinalysis is also described, which probably came from the original Bön tradition. Soma Radza is considered to be one of the first known books of Tibetan medicine dealing with urine analysis, if not the first.

Joannes Actuarius (1275-1328) from Constantinopolis considered that different areas of urine in a flask represent the different parts of the body and hence he modified the shape of the flask in order to produce a more precise reading. This consideration is also present in Chu Tag, as we shall see further on. Joannes Actuarius wrote "De Urinis libris septem," an extensive treatise on urine and uroscopy, developing techniques for the analysis of sediments and was the first to warn about the dangers of a diagnosis based exclusively on uroscopy.

In 1491, Johannes Von Ketham published "Fasciculus Medicinae," the first illustrated printed medical work (see fig.), consisting of six independent medieval medical treaties. This incunabulum was and is still famous for its urine wheel diagram, showing twenty-one urine flasks with explanations about the colour and consistency of urine in relation to the four humours (blood, phlegm, yellow and black bile), helping physicians to make a diagnosis. It was so useful and easy to use that it started to be adopted by quack doctors and even patients as a self-diagnostic tool. As bloodletting gained in popularity, to avoid being cut, patients started to avoid doctors and use these urine wheels without any medical knowledge. That was all it took for uroscopy to escape medical control.

Later, in the 17th century, Thomas Brian published "The Pisse-Prophet or Certain Pisse Pot Lecture," a book that finally devastated uroscopy, which became synonymous with quackery. Since then uroscopy was banished. Laboratory urinalysis started to develop, mainly to diagnose urinary tract diseases. At the same time, in Tibet, the Fifth Dalai-Lama's regent, Desi Sangye Gyatso, founded the Chagpori medical college and published the Blue Beryl, an extraordinary illustrated commentary of the Gyu Shi and Soma Radza. The Blue Beryl shows 5 thangkas on Chu Tag.

CHU TAG

The Tibetan practice of urine analysis is called Chu Tag, short for *drichula tagpa*, a waste water analysis/observation. rTsa rGyud or Root Tantra is the first tantra of Tibetan medicine, establishing the foundation of the science of healing. Among the trees of Tibetan medicine from the Blue Beryl, the second one is the root of diagnostic. Three trunks grow from this root of diagnostic:

- visual examination,
- palpation,
- interrogation.

The trunk of visual examination has two branches representing tongue and urine observation. The fact that Chu Tag is shown in the Tree of Diagnosis reflects the high value of this method.

The main sources for Chu Tag come from the Subsequent Tantra and Soma Radza. Before starting analysis, ngöndros or preliminary advice have to be considered. These ngöndros are divided into 3 sections:

- Preliminary advice for the patient regarding proper diet and lifestyle
- Appropriate container
- Appropriate moment

PRELIMINARY ADVICE FOR THE PATIENT

Urine to be analysed should be the first sample of the morning, after 4 AM, since it is considered more representative of the state of health of the patient because the urine assumingly remains undisturbed by external factors save sleep. The day before collecting the urine, the patient should avoid extreme diets and lifestyle as it could change the aspect of the urine specimen.

PROPER DIET	PROPER LIFESTYLE
Drink enough liquids without being excessive. Avoid going to the toilet and drinking at night. Avoid excess of: ▪ Extreme tastes (spicy, salty, sweet...) ▪ Too oily, too heavy ▪ Too light (excess of greens, low proteins) ▪ Tea, coffee, soda and other energising drinks ▪ Alcohol	If possible : ▪ Empty the bladder around midnight ▪ Digestive walk after dinner. Avoid excessive behaviours : ▪ Not enough sleep the night before ▪ Too much stress, overworking, over-thinking, too much worrying ▪ Having sexual intercourse

APPROPRIATE CONTAINER

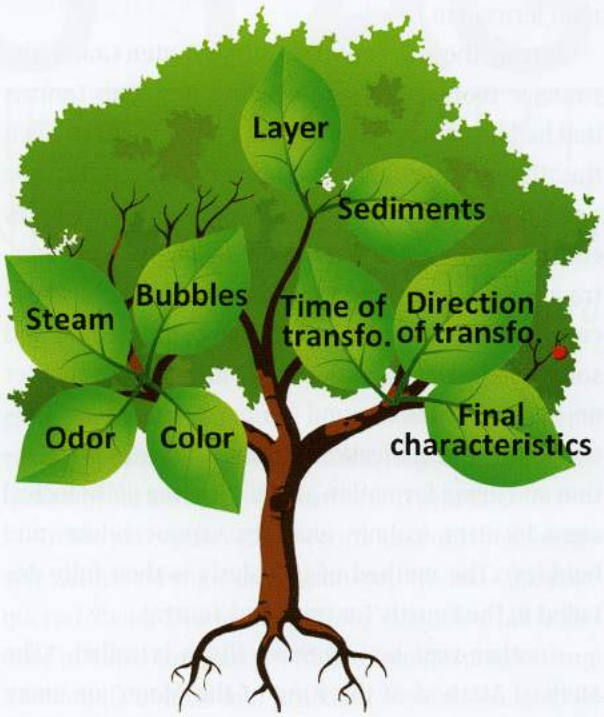
Urine should be examined in a container that does not affect colour perception. It should be white, transparent, or made of clay or steel. As copper may react with urine components, it has to be avoided. Nowadays, sterile plastic urine containers can be easily found in pharmacies, but they are not always useful for Chu Tag as they may include printed labels or be opaque, making diagnosis difficult. Those made of non-coloured plastic are more suitable to observe urine from every side.

APPROPRIATE MOMENT

According to the Final Tantra, the appropriate moment for visual inspection of urine is at dawn, when the solar and lunar energies are balanced. However, this viewpoint will almost never be respected in our modern world.

URINE ANALYSIS

The most common method of Chu Tag consists of analysing nine parameters at three different times. This can be illustrated with this basic Chu Tag tree inspired by tradition.



This tree has three main branches and nine leaves for three different times of observation and nine parameters to be observed. Urine has to be observed when it is still fresh, when it is cooling down to lukewarm, and finally, when it is totally cold. These are the 3 times of observation.

1. When analysing fresh urine, its colour, vapour, odour and bubbles must be considered. To check the bubbles in a traditional way, you have to get three sticks and hold them together at one inch from the ends to form a kind of whip. Then stir the urine and observe whether bubbles appear, their size, location, and the way they behave.
2. While urine is cooling down, sediments in the urine and possible cream or oily film on the top of urine can be observed.
3. Then, when it is totally cold, the physician has to pay attention to the change in urine; when and how it occurs (from the middle to the rim or from the rim to the middle) and in the end, the final characteristics of the urine.

This can be summarized as follows:

- Healthy urine is yellowish like melted butter and has a light smell with moderate vapour, bubbles, and sediments,

- **Bile** (mKhrispa) problems could be indicated by an intense dark yellow urine to the point of appearing reddish, a lot of vapour making the container appear opaque, pungent strong odour, small quick bubbles that sizzle, and cloudy sediments,
- **Wind** (rLung) problems would be more likely to be diagnosed by observing bluish urine with large bubbles,
- Finally, a **phlegm** (Badkan) urine is white with no vapour, odour, nor a film layer; presents small and stable bubbles like saliva, and has sandy sediments.

RESULTS	___ BALANCE	___ mKhrispa	___ rLung	___ Badkan
Colour *KA DOG*	☐ Light yellow, clear and white in the bottom	☐ Dark yellow, reddish	☐ Bluish, transparent Water colour	☐ White and cloudy
Steam *LANG PA*	☐ Slight steam Thin layer on the container, but still transparent	☐ A lot of condensation on the container Container is no more transparent	☐ Little and irregular condensation	☐ No steam, no condensation
Odour *DRI MA*	☐ Typical, but not strong	☐ Strong, sharp, unpleasant	☐ Light odour, and changing	☐ No odour
Bubbles *BU WA*	☐ Normal size and quantity ☐ Normal speed	☐ Size is medium and small ☐ Disappear very quickly (bursting)	☐ Big bubbles, bluish ☐ Disappear quickly, tend to evaporate	☐ Small bubbles ☐ Stable, sticky like a foam or mucus ☐ Disappear very slowly
Sediments *KU YA*	☐ Normal quantity, diffuse	☐ A lot of sediments, diffuse As flakes or clouds ▪ Top: fever in lungs or heart ▪ Middle: liver, stomach ▪ Bottom: kidney, small intestine or colon	☐ Not much, or small, as hair	☐ No sediments, or very small, as hair end or spots ▪ Bottom: Like sand ⇨ cold in kidney, small intestine or colon
Layer *THRI MA*	☐ Very thin layer	☐ Thick and oily	☐ Thin and irregular	☐ No layer or very thin
Time for transformation *DOK DUS*	☐ 5 minutes	☐ Quick Change in colour occurs as urine is still warm, and produces steam	☐ Irregular	☐ Slow Change in colour occurs when urine is completely cold
Way of transformation *DOK TSUL*	☐ From outside to inside	☐ Urine becomes more clear from the middle to the outside	☐ When urine is completely cold, irregular change, no specific direction	☐ Urine becomes more clear from the outside to the middle
Final Colour *LOG ȝEI*	☐ Lighter and clearer than warm urine	☐ Yellow, ☐ Foggy, cloudy, suspension of sediments	☐ Heterogeneous aspect Some parts are clear, others are cloudy, bluish glints	☐ Very clear, bottom is white and transparent, ☐ Sediments are rare and settle in the bottom

SPIRITUAL INFLUENCES

In case of a sudden change in somebody's behaviour, a spiritual influence can be suspected. There is also a special way of practising Chu Tag to diagnose any spiritual influence on a patient. This special analysis is more complicated and very profound as the urine is observed with a meditative look.

First of all, the urine specimen should not be touched to avoid any unintended transformation. Then, the lukewarm or cold urine specimen should be observed from the top. The direction from which urine was poured into the container is considered the Eastern direction. Therefore, this action determines the other directions. One has to imagine a turtle lying on its back with its head facing the south direction and a 9-square chart, like one side of a Rubik's cube, on its belly. This big square is often used in astrology and is called a Mewa.

In case of a spiritual influence, urine should be homogeneous except in one of the 9 squares, where some changes may occur. An example of such change could be that a special image, such as fish-eyed bubbles suddenly appear in the specimen. The doctor then has to consider the location of this change and the kind of manifestation to properly identify which spiritual influence is the cause of such disorder. Of course, to practice this Mewa analysis and to be able to see these special images, you need to meditate and practice in order to develop both the medical and spiritual skills.

CONCLUSION

As we examine urine according to these nine parameters along with the other branches of the diagnostic tree, we can estimate the levels of the three Nyepas. In addition to considering the patient's pathology, a disorder may be identified.

Following pulse reading, Chu Tag is the second most important diagnostic tool in Sowa Rigpa, and it may be Sowa Rigpa's most distinctive feature, as it is not commonly implemented in many other medicines. Confusion may sometimes occur when using both diagnostic tools of urine analysis and pulse reading due to different and contradictory indications. It would be helpful to note that Chu Tag is considered to be more accurate in diagnosing for hollow organs disorders, while pulse reading is considered to be more effective in diagnosing for solid organs disorders.

Nevertheless, Yuthok said that if you get confused in the diagnostic process, you have to put emphasis on the result of the urine analysis to come to a conclusion. However, misunderstanding Yuthok's words may lead to severe consequences: Chu Tag is not a stand-alone technique but a branch of the diagnostic tree. With this advice, we must learn from past experiences. Western uroscopy has been lost, due to its misuse and abuse, and replaced by modern instrumental analysis. However, despite the Western doctors mostly abandoning the practice of uroscopy, this technique of diagnosis is far from useless. Therefore, it is crucial to keep on studying and practising Chu Tag conscientiously by not forgetting this diagnostic tool as being a big part of the identity of Traditional Tibetan Medicine (TTM). More than that, Chu Tag can be effectively adopted in the modern world.

From the early Bön spiritual medical system of Shang Shung to the 21st century, Sowa Rigpa has been influenced by the best medical practices of its time. Therefore, it is in Sowa Rigpa's nature to be an integrative medicine. In return, time has come for Sowa Rigpa to share with Western medicine its best practices such as Chu Tag, thus answering Yuthok's prayer: "My wish is that Tibetan medicine expands like the infinite of the sky for the benefit of all sentient beings." ■

1 JA Armstrong, Dept of Physiology and biophysics, Georgetown University, District of Columbia, USA. "Urinalysis in Western culture: A brief history", Kidney international (2007) 71, 384-387.

2 Darlene Berger, Medical Laboratory Observer. (1999). A brief history of medical diagnosis and the birth of the clinical laboratory Part 1 - Ancient times through the 19th century

3 In « *La médecine tibétaine Gso-Ba Rig-Pa* ». Paris: CNRS EDITIONS, 2007.

PATRICE RICHARD

Grew up in a French blacksmith family. While he was fascinated by ancient cultures, he made a career in the industry. Patrice has been a student of Dr. Nida since 2008. After a study trip to Amdo, Tibet in 2011, he designed an adaptation of the Tibetan metal moxa (*telme*) which he now produces with his parents. In 2016 Patrice published in 2016 his first book in French: "The Tibetan Art of Urine Analysis". Nowadays Patrice practices and teaches Sowa Rigpa, especially diagnosis through urine, and loves to share this ancient and profound knowledge through public conferences.