FRAGMENTS OF CHINESE MEDICAL HISTORY*

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PEKING, CHINA

1. Hua Tu, The Chinese Surgeon

NEITHER before nor since the time of Hua Tu has China produced a surgeon with equal attainments. His accurate diagnosis, skilful operations and simplicity of treatment made him the champion of his time. Had his methods been preserved, the Chinese should have been able to practice their own surgery without borrowing many of the occidental discoveries.

Hua Tu lived at the end of the Han dynasty. Although he did not die a natural death, he lived about one hundred years (*circa* 115–205 A.D.).[1] Of his childhood we know very little. As he grew older, he was fond of travel, chatting and reading. Although he was well acquainted with the classics and versed in the best methods of living, he was very humble and eager to learn, as shown by the following incident: One day he was resting in front of a mountain cave when he heard two men discussing methods of cure. While Hua Tu was listening, one of them, catching sight of him, said: "Here is Hua, we can give him our secret." But the other replied: "That boy is greedy and merciless, how can we give it to him?" Being surprised, Hua Tu jumped into the cave, saluted the venerable hermits, and said: "I have just heard you discuss methods of cure and I could not resist staying here. I always like to save lives, only I feel sorry that I have not acquired any satisfactory way of practice. If you can enlighten me, I shall be very grateful to you for life." The senior of the two old men responded: "We are not stingy about the secret, only it may give you trouble. If you do not, however, distinguish the superior and the inferior, the rich and the poor, and the noble and the common, refuse bribery, and be not afraid of hardship and be kind to the old as well as to the young, you will get out of the trouble eventually." After accepting the "Hippocratic" oath, he was given a book and told not to show it to others. From this he derived several methods most useful in his future practice. Hua Tu spent his last few years with his wife, and though approaching five score, appeared to be youthful and strong.

As a practitioner, he used but few prescriptions and could measure the doses without weighing. Apparently he collected his own drugs for his patients, as drugstores were not yet in existence. In acupuncture he selected only a few sites. In other words, simplicity was his principle. In cases where neither acupuncture nor medicine could help, operation was resorted to. Before incision, he would give together with wine an anesthetic mixture called "Ma Fu Shuan." In Chinese language, "Ma" means hemp or narcotic, "Fu" aromatic, and "Shuan" powder. The constituents are not known today. It is indeed unfortunate to have two different meanings for "Ma," and the use of hemp (*Cannabis indica*) at that time cannot be definitely established. According to a literary mode of interpretation, it seems more natural to have the mixture translated as "narcotic aromatic powder." This anesthetic mixture is obviously the same as that referred to by M. Julien at the Academy of Medicine. Many authors of textbooks[2] accepted it unconditionally as a preparation of Indian hemp.

When the patient became drunk and unconscious, Hua Tu often did laparotomy, and removed diseased tissues. If the disease were of gastrointestinal origin, he would resect the viscera and wash the inside. It is probable that he even did end-to-end anastomosis of the intestines. After suturing and application of a plaster, the wound usually healed in five days and the patient completely recovered in a month. We are not told what suturing materials he used,

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or of the details of his surgical procedures that made his wounds heal so rapidly. A case of intense abdominal pain and falling out of whiskers and eyebrows for more than ten days, he diagnosed as necrosis of the spleen. After anesthesia was induced, operation confirmed his diagnosis, and he performed a partial splenectomy. With the assistance of drugs besides, the patient recovered in one hundred days.



An Effigy of Hua Tu.

By the palpation of pulse (radial) Hua Tu is said to have been able to diagnose many conditions. One day, he was called to see the wife of a General Li. By palpation of her pulse, he diagnosed the presence of pregnancy. General Li informed him that the woman was delivered; but Hua replied that there was one more child yet. About one hundred days later, she had labor pains and Hua was again called in for consultation. Then he told the family that the fetus was dead. After acupuncture and medicine he ordered a person to perform manual removal of the dead fetus. It had the shape of a child but was entirely black. It would be interesting to find out if it were a case of twins with a retained second baby, or a case of superfetation. Another time he was called to see a woman of six months' pregnancy in abdominal pain, and he diagnosed again a dead fetus by the palpation of her pulse. He ordered a person to do a vaginal examination for confirmation and produced therapeutical abortion by drugs. It is interesting to note here that surgeons at that time, as is also true in most parts of the country today, did not handle delivery. Obstetrics as a rule is in the hands of midwives. By the examination of the pulse, Hua Tu was also able to diagnose the presence of worms in a patient who presented himself with epigastric fulness, cyanosis and loss of appetite after eating raw meat. He gave the patient a liquid preparation and made him discharge from the mouth a number of worms with red heads.

Hua's precision in giving prognoses was remarkable. He could predict the recurrence of a disease or death of a patient with the accuracy of days. Aside from acupuncture and drugs, he employed continuous hot fomentation for the bite of a poisonous insect, and cold baths as an antipyretic. A General Kwan was shot by an arrow in a battle and infection involved the bone (osteomyelitis). Hua succeeded in removing the infected osseous tissue by asking the patient to focus his sole attention in playing chess with another person. Although this was not in any way like mesmerism, yet he was able to utilize the patient's concentration of attention at a particular game during his operation so that the patient could stand more pain than otherwise.

In his later life, Hua Tu became the court physician of Chao Tsao, King of Wei (one of the Three Kingdoms). The latter was suffering from headaches and dizziness which were always temporarily relieved after an acupuncture made by this surgeon. Hua, however, was tired of court life and left for

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home on the pretext of his wife's illness. This false excuse was discovered by the king. Hua was summoned and killed. Before he died, he offered a valuable book to the jailer, saying: "This book can save Man's life." Being afraid of punishment for receiving gifts from a criminal, the jailer refused to accept it. Hua did not insist and burned it. Thus ended the life as well as the work of the great surgeon.



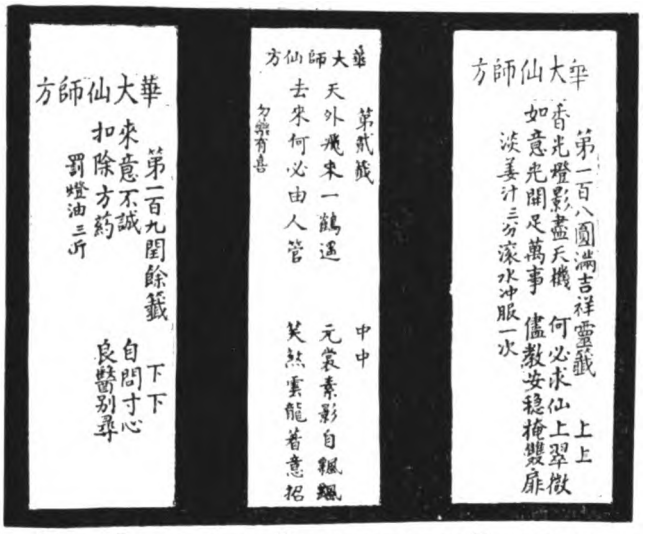
A BOX CONTAINING 109 LOTS.

Hua Tu had two pupils, named Wu Pu and Fan Ou. The former was more interested in internal medicine, while the latter preferred acupuncture. The teacher once said to Wu: "Exercise if not excessive helps digestion, improves circulation and prevents diseases." Obviously prophylaxis was advocated by Hua. Following the advice of the surgeon both of his pupils lived more than ninety years themselves.

Many years later, people thought so much of Hua Tu that a superstitious reverence grew up, so that even at the present day, temples, in which effigies are placed, are erected and dedicated to him in different towns. One of the effigies is represented here. When people became sick they would go to seek medical aid from him. The second illustration shows a box containing some one hundred and nine bamboo sticks on which are labeled numbers and combinations of "superior," "medium" and "inferior" qualities, indicating the gravity of the disease. The third illustration contains three prescriptions corresponding to three numbers on three different sticks. They are translated as follows:

1. No. 108. Superior-superior

The nearby fragrance of incense,
The gleaming of lanterns nearby,
Are all part of God's good will.
Then why should you go afar
Up the mountains to fairy lands?



THREE PRESCRIPTIONS CORRESPONDING TO THREE LOTS.

As soon as you begin to feel in harmony,
All will be well for you.
So close your doors and be at peace.

Dilute ginger juice, 3 fen
Sig. take in boiling water.

2. No. 2. Medium-medium

A crane is flying in the sky
With its quivering suit of gray,
Coming and going uncontrolled by any being whatsoever—
And not even the signs of the Dragons in the clouds
Could effect its course in the least.

No medicine necessary*

*I.e. You are free—do not worry.

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3. No. 109. Inferior-inferior

Your coming hither is not sincere—
Ask your own conscience if this be not so.
So you are not to be granted any medicine—
Seek a good physician elsewhere.

Fined three catties of illuminating oil †

Each prescription, it should be noted, consists of a number, a combination of qualities, a superscription describing the condition in a poetic form, and an inscription prescribing



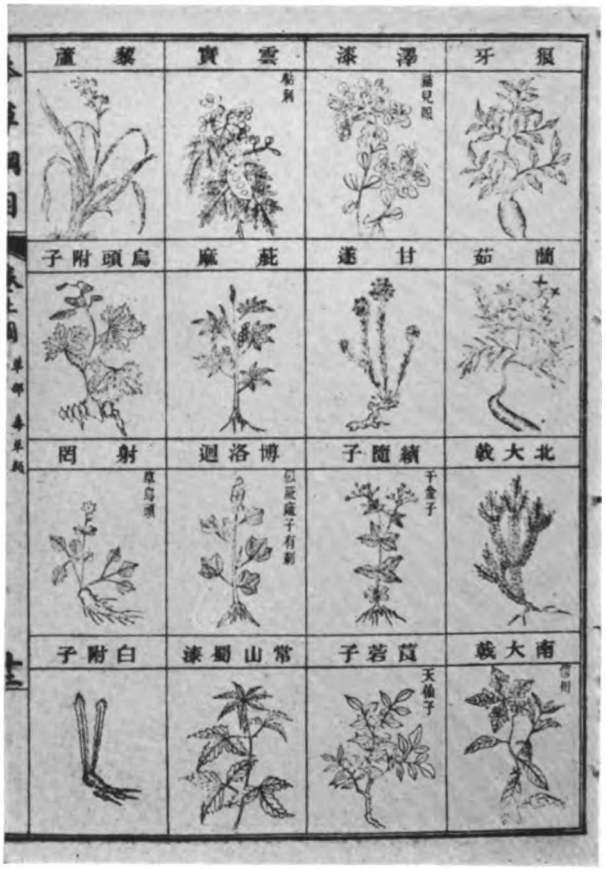
The Front Page of Pen Tsao Kang Mu as Reprinted by One of the Book Companies at Shanghai, China.

one or more drugs, or giving some other advice. If a person has faith in him (Hua Tu) and becomes ill, he would send his relative or friend to visit the temple, draw a lot from the box and obtain a corresponding prescription. After he becomes well, offerings are often made, such as a new curtain or a robe.

† In the temples of Hua Tu, a lamp is often lit throughout the day and night supposedly for the viability of his image. The illuminating oil is of vegetable origin, such as cotton seed oil, bean oil and other similar fatty oils.

II. Pen Tsao

"Pen Tsao," the Chinese dispensatory, has a history almost as long as that of the Chinese race. The first edition was believed to have been written by Emperor Shen Nung some 5000 years ago. The latter lived between 3217–3077 B.C., and was a ruler of great ability. As the father of agriculture, he initiated methods of cultivation and taught people how to raise cattle, so that they



Illustrations of Drugs in Pen Tsao Kang Mu.

would have a constant supply of food all year round. As the father of medicine, he tasted a hundred herbs and selected 365 plants for his book. One hundred and twenty were classified as "superior," 120 as "medium," and 125 as "inferior," the total number corresponding to the number of days in a year. The superior class was supposed to be non-poisonous and possess rejuvenating properties, the medium class to have some toxicity according to dosage

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and to exert tonic effects, and the inferior class was considered poisonous and able to reduce fever and cure indigestion. Early history informs us that Shen Nung met with seventy poisons in a single day, but later historians asserted he could not have tried more than twelve poisons. Then he applied the drugs to the sick people, employing emetics for epigastric discomfort and cathartics for tympanites and constipation. While his discovery of medicinal properties of plants was almost certain, his writing of Pen Tsao was much doubted, especially because the style of the literature and the references contained in it do not seem to belong to that period. Many authors suggest that the book was published in Han dynasty (25–219 A.D.).

In Liang dynasty (502–556 A.D.), Tou Hoon Chien revised the original edition, doubled the number of drugs and published the book in eight chapters. In Tang dynasty (618–905 A.D.), the revision was undertaken by the royal court. Thus Emperor Kao Chun (650–683 A.D.) appointed a committee of twenty-two officials to revise it, resulting in the addition of 114 drugs and redivision into fifty-three chapters. Similarly, in Sung dynasty (960–1276 A.D.), Emperor Tai Chiu appointed in year 973 a revision committee of nine, who inserted 120 more drugs. Additions were further made, and, by the end of that dynasty, the total number of drugs amounted to 1558.

The last edition, which is still in print as published by different book companies in China, is called "Pen Tsao Kang Mu," and was not undertaken by the court, but by a scholar, named Li Shin Cheng, in Ming dynasty. With a wide knowledge of medical literature, he felt dissatisfied with the Pen Tsao of his time, especially because of the confusion of nomenclature. A single drug might be described in several chapters, while two or three entirely unrelated drugs might be placed under one heading. Thus he exhausted the medical references, read over eight hundred textbooks, introduced 374 new drugs, altered his manuscript three times, and completed the book in thirty years. Unfortunately he died before he had a chance to submit his magnificient book to the emperor for approval. His son, however, offered it to the ruler on his father's behalf in the year 1596 A.D. The latter ratified its publication and distribution in the whole country. Supplements have since been made, but do not seem to contain essential additions. The front page of "Pen Tsao Kang Mu" as issued by one of the book companies at Shanghai is reproduced here.

Chinese Materia Medica

VEGETABLE KINGDOM

Extensively revised from Dr. F. Porter Smith's Work

—by—

Rev. G. A. STUART, M.D.

SHANGHAI:
PRINTED AT THE AMERICAN PRESBYTERIAN MISSION PRESS
1911

THE TITLE PAGE OF STUART'S CHINESE MATERIA MEDICA.

The number of volumes varies according to the publisher, but the book contains 1871 drugs under sixty-two orders and sixteen classes, in fifty-two chapters. The table of contents is followed by the illustrations of each drug. The first two chapters are devoted to references, synopsis of medicine, and essentials of therapeutics. Synergism and antagonism are discussed. The third and fourth chapters consist of a classification of drugs according to their clinical uses, while the remaining chapters deal with the drugs proper. Table 1 is a summary of the contents of those chapters.

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TABLE 1. SUMMARY OF CHINESE DRUGS IN PEN TSAO KANG MU

Class Name	Order Number	Number of Drugs	Chapter Number
Waters	1	13	5
	2	30	5
Flames	1	11	6
Soils	1	61	7
Metals and Minerals	1	28	8
	2	14	8
	3	32	9
	4	39	10
	5	47	11
Grasses	1	31	12
	2	40	13
	3	56	14
	4	53	15
	5	73	16
	6	47	17
	7	92	18
	8	23	19
	9	19	20
	10	16	21
	11	162	21
Grains	1	12	22
	2	18	23
	3	14	24
	4	29	25
Vegetables	1	32	26
	2	41	27
	3	11	28
	4	6	28
	5	15	28
Fruits	1	11	29
	2	34	30
	3	31	31
	4	13	32
	5	9	33
	6	6	33
Woods	1	35	34
	2	52	35
	3	51	36
	4	12	37
	5	4	37
	6	26	37

TABLE 1. SUMMARY OF CHINESE DRUGS IN PEN TSAO KANG MU. (*Continued*)

Class Name	Order Number	Number of Drugs	Chapter Number
Utensils and Wearing	1	25	38
	2	54	38
Insects	1	23	39
	2	22	40
	3	32	41
	4	30	42
Fishes	1	9	43
	2	17	43
	3	31	44
	4	37	44
Mollusks	1	17	45
	2	29	46
Birds	1	23	47
	2	23	48
	3	17	49
	4	12	49
Beasts	1	28	50
	2	38	51
	3	12	51
	4	8	51
Men	1	35	52

The total number of drugs derived from plants amounts to 1074, that from animals 443, and that from minerals and other miscellaneous substances 354. Each drug is treated in the following order: (a) nomenclature, (b) definition, (c) collected information, (d) discussion of doubtful points, (e) corrections, (f) character of the drug, (g) therapeutic uses, and (h) formulae into which the drug is incorporated.

With the introduction of Western medicine into China, attention has been directed to the cure with native drugs. Inquiry has been made by F. Porter Smith, who published a Chinese Materia Medica apparently in the latter half of the nineteenth century largely based on "Pen Tsao Kang Mu." The edition was small and soon exhausted.

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A revision was prepared by G. A. Stuart[3] who intended to publish a set of books on the vegetable, animal and mineral kingdoms. Unfortunately he died before his task was finished. His first volume on the vegetable kingdom was printed, however, shortly after his death. A reproduction of its title page is given here. The book is in the English language and consists of a long list of Chinese drugs with their botanical identifications arranged alphabetically, an appendix, and an index. The account of each drug is begun with the scientific name of the drug followed by the Chinese name, a brief description of that drug and an enumeration of its uses as believed by the Chinese.

The vast number of these Chinese drugs not only includes most absurd substances from which they are derived, but also articles, such as opium, rhubarb, chaulmoogra seeds, croton seeds, cinnamon, mercury and many others, which, or products of which, are official in modern pharmacopoeias. They certainly offer a rich field of researches both for scientific elimination and discovery. The recent study of ephedrine, an alkaloid isolated from Ma Huang by one of the writers, reveals a subject possessing not only experimental interest but also clinical importance. This may serve as an example to indicate that valuable drugs may be discovered among the substances of the Chinese dispensatory.

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BIBLIOGRAPHY

1. We owe our indebtedness to Prof. Hu Shin of the National University of Peking, China, for the estimation of this date.
2. PATTEN, J. M. Anesthesia and Anesthetics. Chicago, 1905, p. 13.
Burroughs Welcome and Co. Anesthetics, Ancient and Modern. Lond., 1907, p. 22.
ROBINSON, H. Hewitt's Anesthetics and Their Administration. Lond., 1922, p. 2.
BLOMFIELD, J. Anesthetics in Practice and Theory. Lond., 1922, p. 1.
GWATHMEY, J. T. Anesthesia. Ed. 2, N. Y. and Lond., 1924, p. 3.
3. STUART, G. A. Chinese Materia Medica. Shanghai, 1911.



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