A Glance at

Japanese Medicine,

Ancient and Modern,

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With the Author's Compliments.

A Glance at Japanese Medicine Ancient and Modern.

By WM. TOD HELMUTH, M.D., LL.D.

SINCE the year 1853 when, through the intervention of the United States by Commodore Perry, Japan opened her ports (which had been closed for two centuries) to all nations, the interest manifested in "Things Japanese" has developed to such a degree both in Europe and America that, at the present, it has almost become a *uror*. This enthusiasm has gradually increased since the late revolution, and has been further stimulated as the history of the country has become more perfectly known through the publication of many books and magazine articles, and the establishment in all the large cities of this country and Europe of mercantile firms dealing entirely in Japanese wares.

In looking over the English literature of Japan, to gain information regarding the medical history of that country, I found treatises upon law, commerce, religion, education, arts, agriculture and theology, but nothing upon medicine, save a few allusions in Chamberlain's book, "Things Japanese," and passing remarks in the "Micado's Empire," by Griffis, together with a few lines here and there in other works on ancient Japanese rites and ceremonies.

Upon visiting the American Minister at Tokio, I met Dr. Willis Norton Whitney, M.D., a graduate of the University of Pennsylvania, who is the interpreter at the Legation, and who also holds an ophthalmic clinic at the University. He referred me to an exhaustive contribution of his own in the "*Transactions of the Asiatic Society of Japan*,"* from

*Notes on the History of Medical Progress in Japan.

which, as well as in the Appendix to a *Dictionary of the Roads in Japan* I am indebted for the main historical portions of this paper, The rest I have gleaned from my personal inquiries, from conversations with medical men and from my own observation. It seems strange indeed when looking over a history of medicine to find no mention of the names so familiar to us all—Chiron the Centaur, Hippocrates, Galen, Celsus, Rhazes and Avicenna—are all absent from the category, and the ancient gods, goddesses and great men of Chinese, Korean and Japanese medicine substituted for them, names rather unpronouncable to the uncultivated American tongue, and which as much as possible I will spare you hear me struggle to articulate.

Japanese medicine, or indeed "*Eastern Medicine,*" is probably as ancient as any in the world, and abounds with the same mysticism that enshrouds the early history of Western Medicine. It antedates history and up to two centuries before the Christian Era is almost completely enshrouded in mysticism. To this age the term "Pure Japanese Medicine" has been applied.

In Japanese mythology Izanagai and Izanami originated the art of healing.

THE THIRTY-SEVEN MEDICINES OF THE DIVINE AGE.

It is scarcely necessary to enter into any particulars regarding this portion of the medical history of the country, because interesting as it may be to the antiquarian medical student, the authenticity of the records is often questionable, as are also some of the sources from which they are obtained, but it is interesting to note that during this so-called *Divine Age,* among the thirty-seven medicines then said to be the only ones in use, are several with which we of the present day are acquainted. In giving this list Dr. Whitney, in his article, states that the names were obtained from "*The Nomenclature of Japanese Plants,*" by Professor Matsumura, and from Mr. F. Porter Smith's "*Notes on the Materia Medica of China.*" Thus we have *Scutellaria, Xanthoxylum, Asarum, Plantago, Phytolacca, Artemesia, Zingiber, Allium* and others, which are very often used at the present time. These medicines were supposed to be sufficient for the all-prevailing diseases, which were believed to originate in disturbances of one of the four elements constituting the body and the soul. These were—wind, fire, water and earth. It will be remembered that Hippocrates in the 80th Olympiad supposed the body to be composed of four elements and that it was the disturbance of the equilibrium of these that constituted

disease. As we approach a little nearer the Christian Era, though still uncertain, the records become somewhat more reliable, and within a century or two of that epoch Chinese and Korean physicians were introduced into Japan, and a more thorough, but even at the best imperfect, knowledge of anatomy obtained by the dissection of dogs and monkeys.

EARLY JAPANESE ANATOMY.

It is very interesting to read the anatomy of those days and to observe how nearly some of the descriptions accord with our knowledge of to-day, and to find them quite equal, if not more accurate, than those of the Western World at the same era.

The following description I take from Dr. Whitney's article, who in turn compiled it from a translation of a history of "Japanese Medical Progress" in the original tongue, written by Taken ouchi, Prime Minister to the Emperor Jingo. It reads: "The internal organs or viscera were eight in number; *fugushi*, the lungs; *hokura*, the heart; *kimo*, the liver; *i*, the gall; *ichibuku*, the stomach; *yogoshi*, the spleen; *murato*, the kidneys, and *kusowata*, the intestines. The lungs are in the upper part of the thoracic cavity; they cover the heart, are dependant; they also lie adjacent to the gullet and are divided into five lobes, and contain within convoluted vessels. The color of this viscus is greenish black; and it is the organ of respiration. The heart lies immediately behind the left mamma; its shape is like that of a bottle gourd (Cucurbita lagenaria); it is purple in color, and has a cavity within, which contains blood, and is provided with a middle wall or partition. It is the root of blood vessels. The liver is in the right side of the chest and is divided into two dependant lobes; its color is yellowish black. It is flat and hollow and covers the gall. There is a hole in it which connects with the heart, and also many other holes in it leading outward. The gall lies just outside of the liver. It is of a green color, and in form like the root of the (cymbidium sp.?) It contains within it a bitter tasting fluid of a yellowish color. The stomach lies inwardly at the base of the spleen; its figure is like that of a stone jar (*kame*) and its color is white. It receives the food which comes down the gullet, and digests it, while below, it reaches to the intestine. In women it creates blood, while its water becomes urine (?). The spleen is on the left side of the belly; being above the stomach its color is like that of the *kiri* (Paulownia imperialis), and it contains air. The kidneys are dependant, one on each side of the vertebral column; they have convoluted vessels within, and bind together fibres or tissues; above

they reach to the liver. The intestine extends from the upper part of the navel downward with convolutions ; it is long and bulky, and of somewhat greenish white color. It contains food within, and its extremity reaches to the anus. The first beginning of the formation of the human body is *ki* or vital spirit or air, and *sui*, water. These two make first the fibre, or tissues, and blood, then muscles and flesh, vessels, bones, internal organs, the four limbs, outer skin, nose, mouth, eyes, ears, hairs, fingers and toes, and reproductive organs. The air (or vital spirit) enters through the mouth and nose to the inner organs, where it mixes with water, then ascends to the head, where it enters, minutely divided, into the main trunks of the blood vessels, circulates through the extreme parts of the body, and finally returns and stops in the inner organs.

The water enters through the mouth in the food and drink to the inner organs, and with the air or vital spirit into the main trunks of the blood vessels, where, taking up color, it becomes blood and nourishes the bones, while the portion which goes out toward the skin is without color and becomes *midzusne* (lymph?)."

FIRST POST-MORTEM EXAMINATION.

I note here also that perhaps the first post-mortem examination upon a human body was performed at this early period and perhaps is the first one on record anywhere in the world. Whether this be the case or not, it is certainly worthy to be chronicled as a historical fact in the history of medicine. The *Tokio Medical News* of 1884, p. 887, states that the word *kaibo* (to dissect) was first employed in the *Reisu*† —recording an examination of the body of the Princess Tata-hata, A.D 457–479, who had committed suicide because she was accused of unchastity. The autopsy, which was commanded to be made by the Emperor, revealed a sac filled with water and a stone, thus clearing the reputation of the princess.

This may have been a fibro-cystic uterine tumor undergoing calcareous degeneration, several of which tumors have come under my own observation.

During this uncertain and traditional period, some progress was made, and many innovations, improvements and retrograde steps taken, until about A.D. 669, when the Emperor *Teuchi* established a school of learning and placed over it a Korean priest who had immigrated to the Island and had become naturalized. In this institution

† A work on the Treatment of Internal Diseases and Acupuncture which students were ordered to read.

was a medical department which was presided over by a superintendent and an assistant, with about forty medical students in attendance. There was also a chair of acupuncture, and one of shampooing or massage, together with a professor of diseases of women. Thirty physicians were afterwards added, a teacher of Materia Medica appointed and also a professor of Botany. The course of instruction in this college continued nine years and was graded; one day out of ten and fifteen in the fifth and ninth months were the only periods allowed for recreation. Here we find that long courses and graded classes were considered essential for the training of medical students in these very early days.

The importance attributed to acupuncture, the moxa, and shampooing by the ancient Japanese can not well be over-estimated, and as these practices have continued and are greatly encouraged at the present time, more will be said of them further on in this paper.

WOMEN AS PHYSICIANS.

Another important and interesting record is found in the fact that A. D. 708‡ the Empress Gemmei and her successors encouraged women to undergo medical training and allowed them to practice medicine. The nuns chiefly after having adopted the faith of Buddha could make use of charms, incantations and prescribe medicines for the sick. In the sixth year of the same period, women were appointed professors to instruct students. This may be the first acknowledgment of the ability of women to practice and to teach medicine; but the significant proviso attached to the privilege, viz: *celibacy*, would indicate the sagacity of the law-givers.

INTRODUCTION OF SMALL-POX.

The introduction of small-pox to the island took place A.D. 670. It received the name of *Seki-han-so* or red pox, and was brought by a Japanese fisherman from Shiragi. An epidemic raged throughout the country, especially around Kiyoto and well-nigh devastated the empire. Centuries before this period, even at as remote a time as the Christian Era, small-pox had devastated China and inoculation had been practised with marked success. The first Chinese monograph upon the disease was issued in 1323.

In A.D. 824–834 a Charity Hospital was established at Fujiwara, Fuyutsugu and many medical works published, the authors being in

‡ History of Japan by Percy Thorp, London, 1887, p. 45. Dr. Whitney, loc. cit., page 270, gives the date as A.D. 717.

most instances selected and commanded by the Emperors to perform such service. Among such productions was one written by the professor of acupuncture called *I-shin-ho*, of thirty volumes; a work on hygiene in seven volumes, and a compilation from the Chinese, called the *Biyo-gen-koron* of sixty-seven volumes and 1720 discussions on the causes of disease alone.

Physicians and surgeons in these days belonged to certain families generally of the upper classes, and the descendants of a great physician were supposed to derive from their ancestor not only a predilection for, but a peculiar hereditary adaptability to, medical art.

The admixture of Chinese with Japanese medicine during the next centuries vastly improved its general condition and placed it upon an eminence which it had not hitherto attained. Many medical men flourished and dispensaries and hospitals were founded. Into these details it is impossible to enter. But now the frequent and bloody civil wars which afflicted Japan, arising from jealousies and misunderstandings between the Shoguns were—as are wars always—disastrous to the progress of medical science, and the Chinese School, after being dominant for centuries, began to decline.‖

A glance at the etiology of disease, as understood and taught during these periods, shows it to be a mixture of credulity and superstition, intermingled here and there with an atom of truth, while the therapeutics of the period appears to be much more advanced, in some cases indeed in accord with the more modern notions. All ailments of the body in the early part of this period were supposed to arise from two causes—evil spirits, food and drink; a little later wind and cold were substituted for these factors, and finally heat and moisture were the chief originators of all disorders, the latter coming remarkably close to the modern or so-called *malarial* origin of disease. The devil had an important part to play in the afflictions of the body, intermittent fever (*warawa-yami*) small-pox and nervous affections being supposed to be the work of his emissaries. Sometimes the evil spirits were believed to be sent from the dead to torment the living.

Such being the universal belief it can be readily seen why exorcism was necessarily a prominent feature in the treatment of the day, and why a professorship of exorcism existed among the faculty of the Imperial Medical College.

The study of medicinal plants, however, became general; new

‖ Among these civil wars were those of Hogen, A.D. 1156, Heiji, A. D. 1159; then the civil wars between the north (Yoshinaka) and the east (Yoritoma). Onin, A.D. 1467, and many others.

drugs were introduced into the pharmacopœia and discussions between the schools then in existence regarding the action of several of the then so-called new medicines were common and resulted in a much more thorough acquaintance with their virtues. I wish I could give the names of these but time will not allow me. Among them, however, I find *camphor, liquorice, croton tig., rheum, clarified honey, dioscorea japonica, chenopodium, magnolia, hartshorn, lime, the skin of the white spotted snake,* and many others.

Medical matters went on pretty much in this manner for many years, on the whole rather declining for lack of incentive or foreign stimulation. Examinations for proficiency were abolished for the most part and ceased early in the sixteenth century. Gradually the Japanese physicians lost their *prestige,* were removed from court, and priests and Chinese called to attend the principal personages of the empire. From time to time, however, spasmodic attempts to elevate the art and arouse the dormant spirit of the profession were made until about the middle of the sixteenth century (1531 to 1551) certain influential and learned men arose, who established seats of learning in the island. Among these the most prominent was Manase Shokei, who had been reared in a Buddhist temple in the city in which I am now writing (Tokyo). He revived the dormant interest in medical art, and declared the necessity for the examination of excrements and urine in all cases of serious disease. He was a zealous upholder of the heat and moisture doctrine, as disease producers, and consequently introduced the general practice of diaphoresis, and that failing, recommended acupuncture, the toxic moisture being supposed to run through the holes made by the needles.

The next step forward was the acknowledgement of the existence of the *vis medicatrix naturæ,* and its power in protecting the system and averting disease, a belief which after centuries of buffeting still holds dominant sway in all the medical schools of the world and is upheld by the most learned and skilful in the profession. The propounder of this doctrine was Nagata Tokuhon. The cures made by him were necessarily many, because drug poisoning was abandoned. He introduced the practice of allaying thirst with simple water and other mild beverages, a custom held even to this day among the Chinese and Japanese doctors as reprehensible in the extreme. I am acquainted with an American lady now resident near Yokohama, who informed me that for a fortnight after her *accouchement,* she was not allowed a single mouthful of water, and her baby, now eight months

old, nursed by an old Chinese Aymah, had never tasted water from its birth. I recommended a good drink for it at once.

DISCOVERY BY THE PORTUGUESE.

This is a very imperfect sketch (indeed scarcely an outline) of the medical history of Japan up to the year 1543, when the discovery of the island by the Portuguese§ exerted a tremendous influence upon the government and over all the arts, and upon none more powerful than that of medicine.

This discovery of Japan by the Western nations and the introduction of Christianity (Roman Catholicism) into the island, the immense influence gained by the Jesuits, their non-toleration and persecution while in power, and their final expulsion with torture and bloodshed, form the most interesting of all the parts of Japanese history.

Spain and Portugal received the name of Nam Bam—or the land of the Southern Barbarians. Among those entering the country about this time (1549) were two distinguished Jesuit priests who, it is supposed, were well versed in medical studies, who landed at Kogoshina¶ and obtaining a foothold among the people, began zealously to proselyte among the so-called heathen. This was during the reign of Philip the Second, King of Spain and Portugal. It has been supposed that after due deliberation this method of conversion was adopted as a stepping stone to the ultimate subjugation of Japan by that monarch. However this may be, there can be no doubt that the works of charity and healing practiced by the priests were received with such favor and were so generally appreciated, that the Japanese Government was asked for a grant of land, whereon might be raised medicinal plants and herbs then unknown in the country. This request was granted, and 30,000 tan (7,500 acres) were given for the purpose. This persistent proselyting was so successful that thousands were converted to

§ There is some discrepancy in dates regarding this discovery of Japan, some giving the above year, others 1571; a most excellent authority, however, thus writes:

"The discovery of Japan by Mendez Pinto took place in the year 1542, at the time when Martin Alfonso de Sosa was Captain General of Portuguese India and when this country, through the discoveries and conquests of the east coast of Asia, had reached its greatest extension. With Alfonso de Sosa went to Goa one of Loyola's most zealous disciples, Francis Xavier, who was afterwards designated the Apostle of Japan." (Japan. Travels and Researches Undertaken at the Cost of the Russian Government, by I. I. Rein, Prof. of Geography at Marburg. London, 1888, p. 262).

¶The Micado's Empire, by Wm. Elliot Griffis, A.M., 6th Ed., p. 249.

Roman Catholic faith. Large hospitals for the treatment of the sick poor were erected, the entire expense of such institutions being always defrayed by the priests and their followers. In the years 1542 and 1580 we find them in such power that they were enabled to found the first great school of Western Medicine, giving it the name of *Nam-bam-riu*, which, being interpreted, means "the school of the Southern Barbarians." This school flourished for a considerable period enhancing by its prominence the strength of the Catholics.* In 1593, at the height of the Jesuitic power, the number of Christians was estimated at 600,000.†

In the year A.D. 1610‡ the Dutch entered Japan and were allowed to trade at Nagasaki. The circumstances surrounding the introduction of Dutch medicine are as follows: In the year 1644 a Dutch vessel was wrecked on the shores of the sea of Yamada, on board of which was a surgeon named Kaspar, who was sent to Yedo (Tokio) and there became so celebrated that a school of medicine, called the Kaspar School, was founded. At this time, therefore, there existed in Japan, professors of Chinese, Japanese, Korean, Western Medicine as expounded by the Jesuits, and the system as taught by the Dutch.

AN ECLECTIC SCHOOL.

Human nature is alike the world over, and it is a matter of no surprise that an endeavor was made to combine all these methods in one. A physician of learning, by name Nishi, essayed this and succeeded in establishing a Japanese Eclectic School of Medicine. Shortly after the foundation of a School of Surgery was laid by one Hanaoka Shin, who has left the reputation of being one of the boldest surgeons of his time. He recommends laparotomy after this fashion: "When medicines are ineffectual, as well as acupuncture and the cautery, (moxa) the abdomen and back may be opened, the stomach and intestines washed and whatever is likely to save the patient may be done."§ His anæsthetic was as follows:

Mandara kuwa	*Datura alb.*
Souto	*Aconite.*
Hakushi	*Agelica anomala.*
Toki	*Linguisticum Acutilobum.*
Seukiu	*Conioselinum univittatum.*

* According to Rein, op. cit. p. 271, we find that in the year 1581 there were 150,000 Jesuits in all classes of society and about two hundred churches.

† The Micado's Empire, by Wm. Elliott Griffis, A.M., 6th Ed., p. 246.

‡ History of Japan by Percy Thorp, London, 1887, p. 145.

§ From Whitney's article, page 313.

These ingredients were compounded into a fine powder and administered to the patient who, it is said, soon became unconscious and the operation was then performed. Among the surgical performances were those for carcinoma of the breast, fistulæ, necrosis, and a variety of tumors.

During these periods, 1655–1755, also medical controversies were carried on regarding the relations of the viscera to each other, the functions and the circulation in the intestines, I suppose pretty much in the same manner as they are to-day and have been since medicine began and will be to the end of time, and therefore little mention of them is necessary.

Up to this period the Portuguese and Spanish priests by the means heretofore mentioned had acquired a tremendous power in the Empire; they even had gone to such extremes in proselyting, that natives who would not acknowledge their religion were put to the torture; persecutions of the most terrible character were, in some sections, carried on against the innocent Japanese. The priests looked with distrust upon the entrance of any foreigner into the Island and were even loth to help any shipwrecked mariners cast away upon the coast.‖ The power thus gained caused growing apprehension of the Government. Those in power began to see that ultimately Japan would be subjected to foreign yoke, until finally, in the year 1587, Taiko Sami issued an edict that all Jesuits quit the country in twenty-four days;¶ and in the year 1614 the Emperor Lyeyase expelled them from the country. Great bloodshed ensued; the Buddhists and Shintoists rose *en masse*, and the tortures inflicted upon the Catholics in this attempt of ejectment were of the most appalling and disgusting character.

JAPAN CLOSES HER PORTS FOR TWO CENTURIES.

Then Japan drove out all foreigners, closed her ports and maintained that unique isolation which distinguished her for two centuries among the nations of the world. It took, however, many years to accomplish the complete expulsion of the Catholics, for we read that

‖ An English pilot, Wm. Adams, wrecked upon the coast of Japan, thus writes: "After wee had beene there five or sixe dayes, came a Portugal Iesuite, with other Portugals who reported of vs, that we were pirates and were not in the way of marchandizing, whiche report caused the Governours and common peeple to think evil of us."

(The original letters of the English pilot, Wm. Adams, between A.D. 1611 and 1617. Reprinted from the papers of the Hakluyt Society, 1878.)

¶Rein, Travel and Research in Japan, p. 290.

in 1637 another Roman Catholic Rebellion raged and was only quelled after many months. These facts are mentioned in this place because with the closure of the country, all foreign medical importations were cut off and Japanese medical science—if the conglomerations of the different systems can be called a science—having no impetus from without began gradually to lose the vigor that transplantation of the foreign element had engendered. But the seed of Western Medicine had been sown and thought on medical subjects had been directed into more legitimate channels. The native Japanese still bent on discovering the cause of disease advanced many etiological theories to explain it.

Between the years 1751 and 1763, an entirely new doctrine—certainly to Eastern Medicine—was taught by one Todo of Kiyoto. He believed that all diseases arose from the presence of one poison in the system, and that to eliminate disease therefrom an equally powerful poison was necessary. Rather a foreshadowing in the East of the law *similia similibus* emanating in the West. His school received the name of Ichi-doku-ka.

Thus for a time the history of medicine ran only in the groove of Japanese thought and experience, but in the last quarter of the last century two distinguished physicians, seeing the tendency to declination in all things medical, labored zealously for the elevation of medical science. One was Taki-Genko, the other Sugita Gempaku. The former founded a medical school on the Chinese system, the buildings of which were burned, but were re-builded by his son in 1773. By order of the Shogun, all physicians were ordered to subscribe toward the support of this school. The term of studentship was one hundred days in the spring and summer of two years.* The second (Sugita Gempaku) began to study the Dutch language in 1771, and after having witnessed the dissection of the body of a notorious woman, Awocha Baba (old Mother Green Tea), was so struck with the imperfectness of anatomy, as then understood, that finally, with the aid of some medical friends, he translated, after many interruptions.

The Tafel Anatomica, by John Adams Kurumanns.

This was the first great step towards solid improvement in medical science in Japan. Dr. Whitney in his article expresses the surmise that this great man had embraced Christianity, in other words, had become one of "the forbidden sect." "It is said,"

* Vide outlines of Japanese Education, prepared for the Philadelphia International Exhibition in 1876.

writes Dr. Whitney, "that it was his custom when meeting with words which it was impossible to understand in the translation of his work on anatomy, to make opposite each a cross within a circle, and it is related of him that he always accompanied the sign with a prayer to God that the meaning might be shown him."

VACCINATION.

Vaccination was introduced into Japan by the Russians in 1824, and twenty-five years later by the Dutch at Nagasaki, to which settlers the honor has been generally attributed. The truth is that the art was brought by a fisherman of Yezo named Nakagawa Goroji, who was by a storm driven on the coast of Siberia. He there learned the methods of vaccination, and returning to his home, soon began to vaccinate the people. In an epidemic of variola which, a few years after, visited the place, the beneficial effects of the art were fully established in Japan. In this year Dr. Von Seibold arrived from Holland and gave some instructions in medicine and surgery, his chief study, however, being botany; he vastly increased the knowledge of Japanese plants, flowers and herbs, and wrote the history of these in a valuable work now in the Museum at Leyden.

In the year 1848 an edict from the reigning Shogun prohibited the practice of Western Medicine, while that of Surgery was still allowed. It would seem that not much attention was paid to the pronuncio, for very shortly after its issue we read of colleges being established and hospitals founded for the advancement of medical science.

The first public lecture on Medicine and Surgery after the opening of the ports of Japan, was delivered on the 15th of November, 1857, by Dr. Pompe van Meerdervoort; and shortly afterward the first foreign hospital under the Government was founded.

In the year 1870 a memorial from the college was presented to the Government asking that Professors of Western Medicine be imported to teach in the University, and that the bodies of criminals be allowed for dissection. These requests were granted, and a dozen medical students were dispatched to Germany to be educated, and professors of the varied branches of medical science were brought to Japan. In April, 1877, the University of Tokio was organized with four departments, viz.: Law, Medicine, Science and Literature, and in 1878 a library for the institution was founded.

During the years 1860 to 1870, several English and American physicians gave great impetus to Western Medicine, among whom we may name:

First, Dr. J. C. Hepburn, who was the pioneer of the Protestant Church; he came to Japan in 1859, and sedulously labored for the moral and physical condition of the people for over a quarter of a century. He was held in high esteem by all who knew him. Dr. Eldridge, who delivered a course of lectures in Hakodate and successfully edited a medical journal. Dr. Henry Lanning, of the Episcopal church, who opened the first dispensary at Osaka, where a medical school had been in existence for some years. The Rev. Wallace Taylor was also much interested in the work. Dr. Vedder, of the U. S. Steamer "Stonewall," was surgeon of the hospital at Kobe, established in 1868, together with Dr. Clary, Dr. Anderson, Dr. Simmons, Dr. Berry and many others. Of course, in this paper many names and incidents must be omitted, because it is merely presented as a preface to those who in the midst of professional duties at home have scarcely time to look at other than the medical literature of our own country and of Europe; it may perhaps excite further interest in the medical progress of Japan, which, as in the case of all the other sciences and arts, has been marvelously rapid.

THE MOXA, SHAMPOOING AND ACUPUNCTURE.

Having now hastily described what I have gleaned from the writings of others, I come to consider what particularly interested me, an ignorant medical foreigner, when I entered Japan. I had the vaguest possible notions regarding its medical status, but my general idea was that it was very much below any American standard, and that medical knowledge was chiefly confined to the Buddhists and Shintoists, with here and there the foreign element intermingled.

As I stood upon the deck of the steamer as she came up the Bay of Tokyo, the numbers of naked men—save only what might be called suspensory bandage, minus the hole in the centre—propelling their picturesque looking boats around the ship, was a novelty, but one to which one becomes accustomed in a very short time. The muscularity of these men, especially of their lower limbs, was noticeable. When I was enabled to more closely inspect their persons, I found that few of them had not round white cicatrices upon various portions of their bodies, bearing witness to the use of the moxa. This method of cauterization has been in existence in Japan for many hundreds of years; mention is made of it in the 11th century.† The cone to be burned, which is composed of the dried leaves of the artemisia vulgaris kalefolia (mugwort), is placed upon different portions of the body for

†Micado's Empire, by William Elliott Griffis, 6th ed., page 207.

different affections, and then lighted. Works upon the subject of the moxa were published and explicit directions given for its use. Kaempfer in his History of Japan,‡ has been very explicit in his manner of using this cautery. A specimen or two may suffice. "In a difficult delivery you must burn three cones on the extremity of the little toe of the right foot. This will give instant relief and promote recovery." "In obstruction of the menses and in fluxes, in whites, piles and the ulceration of hæmorrhoids, you must burn the place called Kiso on both sides with five cones. To find out this place, you must measure from the navel straight down five inches, then sidewise at right angles five inches, so that there be ten inches between the two places to be burnt." Pages of these directions can be found and volumes have been written upon the subject, evincing the great reliance of the Japanese on this method of cauterization; indeed, this, with acupuncture and shampooing, or as we term it, massage, are three most ancient methods of cure, and are at this time largely practiced all over Japan. The latter, massage, as has been already mentioned, had its professor in the seventh century, and has been regularly practiced ever since. It formerly was only practiced by the blind men (Amma) who became very proficient, the increased delicacy of touch of these unfortunates, rendering them especially adapted for it. At the present time, however, the administration of massage is not limited to the blind or to the male sex. Women are allowed to practice it, and very deft and gentle they are. I have seen them as they kneel upon the bed—in a way peculiarly Japanese—and thoroughly do their work. In all the cities, towns and moderate sized villages, these masseurs and masseuses wander slowly along the streets, often in front of the hotels, many of them dressed in a white or figured Kimonas and holding a staff. They use a rude flute or pipe from which three very melancholy sounding notes are produced, and one hears all night long at intervals two and even three of these "professors" notifying the public that they are ready to be called at any moment.

While mentioning the moxa and shampooing, it may be as well in this place to add a word concerning the third ancient practice already mentioned, which has descended to this day, viz: acupuncture. This branch of medical art originated centuries ago in Korea, and from thence was imported into Japan. Many schools for instruction in the various methods of its application flourished successively and from age

‡Quoted by Whitney in his Notes on the History of Medical Progress in Japan, p. 289.

to age to the present day. The needles are about the size of the acupuncture needles that we use, and the hollow ones resemble those of our aspirating needles. They are made of steel, silver or gold, and are driven into the integument with a small mallet with force sufficient to pierce the skin and enter the connective tissue; they are then twisted sharply round several times and withdrawn. Ten, fifteen or twenty insertions are required, according to the nature of the disease for which they are applied. When the point is withdrawn the spot is rubbed with the finger in the same manner as we do after the use of the hypodermic needle.

JAPANESE HOSPITALS.

Upon my arrival at Tokyo I presented the letters which I had obtained at the Legation of Japan at Washington, one to Dr. Kanehiro Takaki, who, by the way, is a F. R. C. S. (Eng.) and Director-General of the Medical Department of H. I. M.'s Navy, and the other to Dr. Kensai Ikeda, physician to H. I. M., the Emperor. The latter was unfortunately absent at the Palace, but I was received kindly and graciously by Dr. Takaki, who speaks English fluently. I was not obliged to take off my shoes at the door, although the many sandals at the threshold indicated a large number of patients in the waiting-room. I was ushered upstairs to an apartment furnished in full English style, and filled with beautiful bronzes and other works of Japanese art. Tea was brought, and the Japanese smoke box, which you find everywhere, in all the shops, in the temples and in the houses. Still more to my surprise, the *Sei-i kwai* Medical Journal was brought to me, a periodical printed one-half in English and the other half in Japanese. In the former I found among the original articles, one upon the "Toxicology of Male Fern with special reference to Visual Disturbance," and "A Review of the Preventive Measures taken against Kak'ke in the Imperial Navy." In the latter "Clinical Observation on Poplyteal Aneurysm," a most aggravated case of which I saw in the Red Cross Hospital in the afternoon and from observations upon which the article was taken, and "Clinical and Post-Mortem Notes on General Tuberculosis." Besides this, there was any quantity of ordinary journalistic matter, society proceedings, sanitary gleanings, condensations, etc. I note these facts, as they seem peculiarly interesting to me as indicating the rapid progress in all medical matters within the past thirty years. At the present there are ten or a dozen medical journals in Japan, and as appropriate in this place I might say that I saw afterwards at the Legation, through the kindness of Dr. Whitney, a

copy of the new Japanese Pharmacopœia published in Latin, and I think also in the Japanese tongue. In the afternoon I visited with Dr. Takaki the Red Cross Hospital, and was surprised beyond measure at its modern completeness. It occupies, I should say, a space equal to two full-sized blocks in New York; has a front built of brick and stone, containing the usual offices, all of which are handsomely furnished in American style. The surgeons, staff and nurses are all wearing the so-called European costume. The first thing that strikes one is the extravagance of space occupied. The rooms are all spacious, with high ceilings, and commanding a beautiful prospect of the surrounding country. The entire construction is upon the pavilion plan, each pavilion being one story high and entered from a corridor, which opening upon a well-kept garden runs entirely around the buildings. I may be better understood if I say, that behind the building devoted to offices, museum, library, etc., is a large, oblong, hexagonal garden; entirely around this garden extends a corridor, and opening off this corridor at right angles and at a distance of about fifty feet apart are built the pavilions, four on each side and two at the further extremity. After the usual amount of bowing, tea was brought and the smoke-box. After patronizing both of these we went through the institution. Two things struck me while passing through the main building; one was the beauty of the pathological specimens; the second, the rare coloring of the pathological plates. These are all water color drawings, executed in the most realistic colors, true to nature, or rather to disease, and very carefully done. I inquired the cost of these paintings and found it to be about two yen each, equivalent in our currency to about $1.44. The surgical department is very complete, especially that devoted to operations. The floors can be flushed with water at a moment's notice, and every appliance for complete antisepsis is at hand. I was particularly pleased to see all the approved apparatus for plaster bandaging and casts. The instruments were numerous and very much after our own patterns. I was also shown a number of leather cases all marked with the red cross, which were held in readiness for the field in case of war or insurrection, and which contained all the apparatus (instruments, splints, bandages) for surgical operations and surgical dressings. These at a moment's notice can be placed in the ambulances and sent to the seat of war or tumult. This hospital is under the patronage of the Imperial Household, and the management of the Red Cross Association, according to its recent circular,* which was kindly translated for me by Prof. Mazo Nitobe.

§The History of the Red Cross Hospital. Tokio, July, 1892.

The objects of the hospital are as follows :

1. In times of peace for the reception of those injured by accidents or wounds of any kind.

2. In times of war it is to be converted into a military institution.

3. In times of peace, according to the merciful power of the Imperial Household to be open for the good of the general public.

There is a department of Internal Diseases, Surgery, Diseases of Women, Ophthalmology and Otology. Very poor persons may be attended free of charge but, as a rule, remuneration is required from patients. The following table will show the number of rooms, the charges and the cubic feet of air given to each patient.

Classes.	No. of Rooms.	No. of Beds.	No. of Persons in Room.	Cubic Metres for Each.	Daily Charge.	American Currency.
1st	13	13	1	75	3.00 Yen	$2.10
2nd	12	12	1	60	Y 1.50 s	$1.05
3rd	16	32	2	45	Y 1.00	$0.70
4th and 5th.	8	28	2 - 5	30	.30 - 60	$0.21 - .42
Cottages	4	6	1 or 2	31	1.50	$1.05
Charity	4	20	5	28	.....	.....

The expense of carrying on this hospital is defrayed by an annual contribution of 5,000 yen a year, to be continued for ten years after 1891, and by 5,000 yen contributed by the Red Cross Association ; the balance of the income being derived from the "pay patients." At present the number of charity patients is only ten, but the private rooms appeared quite well filled. There is a good training school for nurses here. The nurse must be over twenty and under thirty years of age, must remain in the hospital for two years after her graduation, and she is obligated to hold herself in readiness to be called at any time within twenty years.

CHARITY HOSPITAL, TOKYO.

After having gone thoroughly over this institution we drove to the Charity Hospital, founded and under the immediate supervision of Dr.

Takaki. This institution is purely charitable and is dependent upon voluntary contributions for its support. It was founded in 1882, by Dr. Takaki, who takes the greatest interest in its welfare. Its last report, which I had also translated for me,‖ shows that since its opening in 1891, there have been treated, *in* patients, 2,542; recovered, 1,072; improved, 842; died, 569; remaining, 59. The number of *out* patients —that is, those treated in their private residences—was 28,255; of these there are 14,482, who are called "one-day patients," by which I suppose is meant those requiring one visit only; thus making the number of those more seriously affected 13,773. Of these 8,419 recovered, 4,689 improved;¶ died, 434; remaining, 231. In passing through the wards of both these hospitals, I was struck by the position of the patients lying in bed, especially that of the women. They seemed to rest on their left side, with the knees slightly drawn up, and the feet always in a state of flexion. This must be attributed to constant habit of the Japanese of kneeling. By the term "sitting down," the Japanese mean kneeling with the foot flexed upon the floor almost in a line with the leg. The facility with which they assume and rise from this position is remarkable. They must find comfort in it, for where there is plenty of opportunity for them to sit as the Europeans, they draw their legs up under them whenever it is possible.

KAK-KE (BERI-BERI).

The most highly interesting portion of this visit was the opportunity afforded me of seeing several cases of kak'ke (beri-beri), a disease peculiar to Japan, China and Korea, and one which has caused a great deal of discussion among the Faculty in Japan. As Dr. Kakaki had made an especial study of this affection, and through his especial treatment it had been stamped out of the Japanese Navy, I was very glad to see these cases and to hear what he had to say concerning it.

I think perhaps that this is the very latest information concerning the disease that comes from Japan. Kak-ke is classed, I believe, as an endemic neuritis, which I suppose should be one of the forms of multiple neuritis. The symptoms, as detailed to me by Dr. Takaki, are various and there are several degrees of severity. There are both sensory and motor disturbances. The disease may begin

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‖ The Fifth Report of the Tokyo Charity Hospital, 1891.

¶ In the translation, this number is said to have "lightly recovered"—which I take to mean "improved."

with a patch of numbness on the leg, circumscribed and varying in size. This may be accompanied with fever or not. In the first case I saw the tendon reflexes were lost and there were two areas of anæsthesia. After a time general anasarca sets in, often accompanied by violent palpitation of the heart, and sometimes general and local paralysis. There is always more or less anæmia, sometimes to a great degree, and muscular atrophy. In another case I observed paralysis of only certain sets of muscles, which I understand frequently is present, and in some instances proves fatal. Œdema of the lungs also is in some cases a prominent symptom. I was so much interested in this to me entirely new disease, that upon my return to the hotel I wrote to Dr. Takaki, asking the following questions :

1. Does the disease attack others than soldiers and sailors ?
2. Is it found much outside of Japan ?
3. What were the actual articles of food eaten by the sailors befor you inaugurated your new diet list ?
4. Are the symptoms always those of neurosis, viz. numbness hyperæsthesia, followed by cardiac palpitation ?
5. Are there ever convulsions ?

To the 1st question the Doctor replied : That the disease may attack any person without regard to occupation. That he has seen it among scholars, boys, officers, carpenters, men, etc.

To the 2nd : The answer was in the affirmative, with the specific words "where people take rice much as an article of diet."

To the 3rd : "Too much rice with comparatively small quantities of meat, fish, etc. (albuminates)."

To the 4th : "Chief symptoms: Œdema, numbness, motor paralysis of limbs, loss of reflexes, indigestion and heart affections (palpitation). Œdema is almost always the first symptom."

To the 5th : The simple word "never" is affixed.

By a perusal of these answers the symptomatology of the disease may be made out.

It may be well to state here that other ideas have been promulgated regarding the etiology of the disease, some declaring it to be caused by an intestinal parasite; others to a micro-organism. From the results of the dietetic treatment already mentioned as adopted by Dr. Takaki, there can be no doubt that the disease arises from the superabundance of carbohydrates and the lack of albuminous food. It is a well-known fact that for centuries rice has been the staple of food in Japan; that meat and milk were unknown until a few years ago.

The following quotation will give some idea of the methods by which the doctor succeeded in discovering the cause and of eradicating the disease:*

"From the end of 1880, when Director-General Kanehiro Takaki—then Deputy Inspector General—was the director of the Tokyo Naval Hospital, he determined to inquire into the cause of Kak'ke. He noticed the great difference between the number of Kak'ke cases on board ships and in barracks, and also the same difference in the ships which went on long voyages, and began to think that such difference must be due to the difference between the articles of food given on board ships and in barracks, as other things being the same. Obtaining permission from the Minister of the Navy Department, he made an examination of food by visiting ships and barracks within the limits of the district of Uraga. He obtained a report showing the articles and quantities of food given in each ship or barrack during a week, and found on examination, that the amount of albuminates contained in the food given was not sufficient, and that the amount of carbohydrates was too great for the due preservation of health."

He then concluded that the occurence of a large number of cases of Kak'ke, whether in men on long voyages or amongst ordinary students and shop assistants on shore, must be due to the food used, this being the cause of the great number of Kak'ke cases occuring in the ships and barracks within the limits of the Uraga district, and he inferred that the cause of Kak'ke must be in the improper proportions of carbon and nitrogen contained in the food. The immediate effect of supplying the men with a properly regulated diet is forcibly illustrated by the facts, that in six years prior to the introduction of the proper diet, out of 29,321 men in the navy there were no less than 9,516 cases of Kak'ke; in the six years immediately following the adoption of the improved diet, out of 48,275 men the number of cases was 765, making an average of about one-third in the first period and one-sixty-third in the second. Since that period the disease is practically eradicated. Since my return from Japan, even as late as January of this year, I find a most interesting article by Albert S. Ashmead, of New York, on the *Kak'ke Heart*, which is noteworthy in this place.† After giving an account of the observation of many Japanese physicians on this subject, beginning as early as A. D. 640, he says: "They show that a prolonged *first sound* has been found in all stages of the

* Review of the Preventive Measures taken against Kak'ke in the Imperial Navy, Tokyo, Twenty-third year of Meiji (1890), p. 5.

† *The International Medical Magazine*, Phila., Jany., 1893, p. 1277.

disease," which confirms the statement made by Dr. William A. Thom, Jr., Physician to the British Vice-Consulate at Norfolk, Va., who recognized this condition in the cases lately treated at St. Vincent's Hospital. This paper is well worthy of attention by those desiring further information upon the subject.

I am told by a professor of the University that, up to the times of the revolution, physicians were not permitted by royal edict to enter society, and were compelled to lead secluded lives. As with the priests, commingling with the world distracted their attention from the proper pursuit of their profession, it was thought that the entire life of a medical man should be concentrated upon the healing of the body. In order, therefore, that there should be no extra temptations and that the people should be able to distinguish physicians from other professions, all the doctors were obliged to have their heads cleanly shaved.

Upon the same authority, I must state, sorry as I am to say it, that American medicine does not hold a high position at the present time in Japan, the decided preference of all the people inclining to the German practice. This, I am told, can be, in a measure, accounted for, by smallness of the fees, and to the lack of attainments possessed by many who, perhaps, after other unsuccessful trials in America, choose Japan as a last resort wherein to practice the healing art. The fees of the Japanese are, indeed, small, and are not regulated by the number of visits made, but upon the quantity of medicine given. I think, about eighteen cents a day is allowed for the drugs used. The doctors, to increase their fees, supply medicine for a week or a fortnight.

To make this paper a little more complete, I will add here a letter that I received from Dr. Whitney in answer to some questions I asked him regarding medical practitioners, and one also from Miss Richards in reference to training schools for nurses.

UNITED STATES LEGATION, Tokio,

August 2, 1892.

DEAR DR. HELMUTH :

There are several women practicing medicine, two of whom I am personally acquainted with, Dr. Okami, a graduate of the Women's Medical College of Philadelphia, and another whose name I have forgotten, who is now located on the Negestei road, Yokohama, in a neat little hospital. There are no homœopathists, hydropathists, or Western eclectics in Japan, although there are a very numerous class of eclectics, who practice Chinese and Western Medicine.

I should have said that the above-mentioned lady doctors, and one or two more I have heard of, are fairly well received. The New Charity Hospital Medical School will admit ladies from next term . .

Sincerely yours,

(Signed) W. N. WHITNEY.

M. E. HOSPITAL,
Broad and Wolfe Streets,
PHILA., September 22, 1892.

DEAR DR. HELMUTH :

I, as you may know, went out under the American Board of Missions, and organized a training school for Japanese women in Kyoto, Japan. I found that the nurses who graduated were treated with a great deal of respect, and with more consideration than nurses are here in America. Training schools where nurses receive excellent instruction have been organized; and I am told nurses graduating from these schools receive very large wages for women in Japan. The nurses who have graduated from the Mission School have, many of them, been invited to go into hospitals in charge of the nursing departments, and have been treated with respect.

Training schools have elevated the nurses who have been trained. Of medical women and their standing I know less than I do of nurses. I have been away from Japan nearly two years. During that time some medical women who had been in America in medical colleges have returned to Japan. One, I think, has a hospital appointment in Tokio. Training schools are popular. Several Japanese women have been sent to Europe into training schools to sufficiently perfect themselves to take charge of training schools in Japan.

Very sincerely,

LINDA RICHARDS.

FEBRUARY 25.—Since this lecture was delivered before the Homœopathic Medical Society of the County of New York, on Feb. 9, the author has received a letter from Yokohama, bearing date of Jan. 27, 1893, stating that Dr. Mary A. Gault, a graduate of the Cleveland Homœopathic College, Class of 1883, has been successfully practising homœopathy in Japan for two years. This fact has been mentioned that the reader may know that the seed has been sown, and that the prediction is made, that as certain as the sun shines it will in good time bear fruit in abundance.