

The Sources and Developments of the Japanese Medical Thought

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Summary

The three main currents surging incessantly toward the Japanese Islands and the seasonal winds and rains carried in different kinds of prototypes of the Japanese. Therefore a variety of medical thoughts seemed to be present there. When *Kojiki* appeared, *Izumo* and *Yamato* became the leading tribes, with their respective medicine, technical and incantatory, forming the mainstreams in the field of medicine. This study has pursued through some of the literary works in those days how these two main medical thoughts progressed from the *Chūko* period through the *Chūsei* period. During these periods, the level of medical care made steady developments with overseas medicine introduced, which were thought to affect favorably the life spans of emperors. With this in mind the author investigated various literature without obtaining simplified findings.

Foreword

Man is said to be an animal controlled by its environment. In the book, *On the Ancient Medical Art*, Hippocrates stressed that "those who are going to be engaged in medicine in a proper way" should inquire into season, wind, water, and land¹⁾. In the studies on the Japanese medical thought, it is also very important to take into consideration its natural surroundings with peculiarities in geographical and geological features, three big currents, seasonal winds and rains, and its historical environments.

According to the myths, ancient Japan was in the process of transference to systematization as minor confrontations which were repeated for a long time in various parts of the country among people coming across the seas from the four winds were suppressed with gradual unification of the tribes.

Therefore, it is impossible to think that there was only one type of medical thought in those days. In other words every tribe must have had its own medical thought. In this study, picking up the two tribes, *Izumo* and *Yamato*, from the representative classic literature of Japan, *Kojiki*, *Nihonshoki*, *Izumono-kuni-Fudoki*, *Hōjōki*, *Tsurezuregusa*, *Hogen-monogatari* and *Heike-monogatari* etc., a comparative investigation was made between the medical thoughts of the two tribes described in the myths and literary records.

I. The Source of Technical Medicine

It is due to the myth of A White Hare of Inaba that *Ohkuninushi-no-kami* was thought to be the father of medical men. The story of *Kojiki*²⁾ says:

When the brother-kamis of *Ohkuninushi-no-kami* passed by the Cape of Keta, they found a bare hare lying on the ground. The brothers advised the animal to wash itself with the seawater, and to expose itself to the wind, going up to the ridge. But its bare skin hurt more badly as the seawater dried. Then *Ohkuninushi-no-kami* came along and told the suffering hare, "Wash yourself with fresh water. Next gather the ears of cattail and scatter them around. Then roll about over the sheet of the ears". The hare's faithful obedience to his advice resulted in a complete recovery of its health. This story is called A White Hare of Inaba.

The reason this is considered as an origin of medical care is that washing wounds with fresh water to keep clean; attaching fluffed ears of cattail to the whole body; and taking rest by lying.....these things have something in common with the fundamentals of modern surgery. These methods belong to the category of technical medicine.

Following this story, *Kojiki*²⁾ describes a myth in which *Kamimusubi-no-kami* revived *Ohkuninushi-no-kami* who has been burnt to death by his brother-kamis by giving him a liquid medicine made by mixing the juices taken from *Kisagai-hime* (ark shell) and *Umugai-hime* (clam) with breast milk. This is also a treatment for burn with a medicine and a good example for surgical treatment. It should be noted that *Kamimusubi-no-kami* is a god who appeared first in the Creation and a deified being of the creative power. The old

word “*musu*” means mystic working for giving birth to a new life. It is used in the words of the National Anthem of Japan, *Kimigayo*, “May the Imperial reign last till moss forms (= *musu*) on the rock”.

Takamimusubi-no-kami, the other kami appearing first with *Kamimusubi-no-kami*, is also a kami who performs the work of “*musu*”. The two are said to have created this world. It is important that such a Japanese view of life be taken into consideration.

In the Hunting Age, people would run after the game in the open fields and sleep on the grass at night, or make a voyage chasing fish in the distant seas. In many cases, they are imagined to have sustained injuries during violent fights with the animals and fish. Therefore the healing art for these injuries based on experience had to be handed down with due care. So reciters in the times of no alphabet handed down these valuable medical knowledge in the form of myth from generation to generation. If the research materials are limited to *Kojiki*, therefore, it is natural that these myths be thought of as origins of the Japanese medical thought.

Referring to *Sukunahikona-no-kami*, he was considered as a cooperator to *Ohkuninushi-no-kami* in the work of nation-building.

*Nihonshoki*³⁾ says:

Ohnamuchi-no-kami ruled over the world in cooperation with *Sukunahikona-no-kami*. They provided the ways of treating illnesses for people and animals. They also provided the ways of purification to get rid of damages or injuries from harmful birds, animals, and insects. All the people, therefore, have been greatly indebted to the two kamis.

This record is a legend in which the two kamis are regarded as the fathers of medical care, and the story suggests the medical thought of the Japanese people at the time when *Nihonshoki* was edited.

In the book, *The Outline of the Medical History in Japan*⁴⁾, Yū Fujikawa describes clearly, “The two gods seem to have set up rules for treating illnesses by collecting the various methods that had been prevailing for a long time. They were never originators of medical care but the foremost medical men in our country, according to the historical literature”. It is aptly said. The contents sound like fairy tale and are negligibly fictitious

in the light of modern medicine, but from the historical viewpoint, they are valuable materials which had been handed down in a simple form of legend so that anyone could understand how to treat illnesses and injuries. Compared with the Yamato-line medical thought referred to later, the Izumo-line presents a considerable contrast with it.

In order to know the function of *Sukunahikona-no-kami* ranked with *Ohkuninushi-no-kami*, it is best to read the following folk=songs in *Kojiki*.

This excellent sake has been brewed not by me but by *Sukunahikona-no-kami*, Director of sake, who lives in a cave in Heaven. He devoted all his energy almost recklessly to brewing this good sake to present it to you. Drink it up ! Come on, please !

This is evidently a song for invoking the divine influence, believing that microorganisms' work to alcoholize starch is the blessing of *Sukunahikona-no-kami*, that is, a song of praying for birth of a new material. In reality, this is a proof that they believed singing this song would result in sake of superior quality. That is why we call even today nice sake *ginjo* (which means sake brewed while singing).

The function of *Sukunahikona-no-kami* is not limited to sake-brewing. It is believed as the work of this kami to make keepable foods such as pickles, *natto* (fermented peas), and materials for *sushi*).

Originally, *Sukunahikona-no-kami* was a small-figured kami who came over to this country aboard a small ship from beyond the sea to cooperate with *Ohkuninushi-no-kami* in nation-building. And he was to leave for beyond the sea when they finished the work. He might be regarded as a being like a micro-organism in terms of modern science. He was believed to be able to restore an injured part of the body by developing granulation. So he was an important kami who took care of sick people and carried out treatment under *Ohkuninushi-no-kami*, physician. And *Sukunahikona-no-kami* was also thought to "be in the rock". A dendrobium which grows on the rock in a high mountain and puts forth mysterious, white flowers was once used as a medicinal herb and called "*Sukunahikona*". This fact shows *Sukunahikona-no-kami* was involved in medical care. Although the pharmaceutical components and practical effects of the plant are not proved, it would be certain that the herb was

effective in terms of faith. The author thinks that the above mentioned ears of cattail had also an effect due to faith.

According to the results of dialect research, the following places are all called *Kama*, a deep water of a river, the depths of the seashore, a deep pool occurring at the site of the broken bank, the basin of a waterfall, and a reservoir. A cave for storing potatoes, and a snow cave (*kamakura*), in which children play in winter, are also called *kamas*. *Kanegafuchi*, a name of a place, might be originally *Kamagafuchi*.

In *Izumonokuni-fudoki*⁵⁾, a book descriptive of the natural features of the Izumo region, there are myths in which *Kisagai-hime* shot at a dark cave (*kama*) with an iron bow, and *Umugai-hime* flew about, transformed into a bush warbler. Both represent mythicized medical care.

Putting all these stories together, *kama* means the dreadful place where the demon of ill health was believed to live. It is *kama* or *gama* grass that is still gentle and fresh in spite of growing at such a fearful place. So ancient people seem to have believed that *gama* grass had a spiritual power that prevented the demon from affecting the plant. The water lily was believed to be the flower blooming in the Buddhist paradise because it grows in the bog but nonetheless puts forth noble flowers. The both flowers had the same reason why they became the objects of faith. It may safely be said that both of them have immunity to disease in terms of modern medicine. This is endorsed by a folk belief of the Iris Festival on the fifth of May. On that day, people put the leaves of Japanese irises into the eaves or the gate-roofs to purge noxious vapor, and take a bath with iris leaves floating in the tub, wishing to be in good health. These customs result from the belief that the Japanese iris has a medical divinity. In addition, the belief for disease prevention brought about drinking "iris sake", making "iris swords" by boys because of the shape of the iris leaf resembling that of the sword, and striking each other with ropes made of the leaves. "*Shobu*" in *Kanji* (Chinese character) for iris means vigorous *gama* grass. This implies that the word originates in the belief that the *gama* grass has an influence upon the demon of disease. The *kanji* sound of iris, *Shobu*, is the same as that of encouraging *samurai* spirit (*shobu*), people thought all the more of the divinity of a Japanese iris.

There are other examples of Japanese word in which a Chinese

character of *gama* is included; *tampopo* (dandelion), a material for peptic medicine, and “*budo*” (grape), which has long since been believed to be of medicinal use in Europe and China. The author considers that all the plants that contain a chinese character “*gama*” in their names were medicinal plants which had something to do with the *gama* grass.

Above-mentioned *gama* which has been handed down in *Izumo* myths under the disguise of *Ohkuninushi-no-kami* can be taken as the legendary object of a primitive belief. Therefore, it should be particularly noted that its medicinal effect was emphasized in the myths.

II. Origin of Incantatory Medicin

The author already reported⁶⁾ on the medical thought of the *Yamato* tribe, the outline of which, based on *Kojiki*, is that Yamatotakeru-no-mikoto, representative hero of the *Yamato* tribe, took the way of “*kotomuke yawasu*” (suppressing by holding a festival) violent demons of ill health living in the mountains or rivers. In *The Life of Yamatotakeru-no-mikoto* there are only three stories in which he put down rebels, while twelve myths are found in which he subdued demons of the mountains or rivers. An aspect of incantatory medicine can also be noted in the point that he was attacked and killed by the demon of *Ibuki* Mountain. “When a maiden in the service of a *Shinto* shrine was engaged in healing, her primary function was to exorcise curses out of the sick and injured”, says Denichiro Morita, “it seems that since comparatively early times there existed skilled curers who were directly engaged in treatment under the maiden”⁷⁾. Perhaps these practices were seen in far later ages than *Kojiki*, but essentially they are considered to be based on the same idea.

As we have seen, as far as the Genesis of Japan described in *Kojiki* and *Nihonshoki*, representative Japanese classics is concerned, it is possible to know the fact that while the *Yamato* tribe, overseas visitors, relied mainly on incantatory medicine, the native *Izumo* tribe already thought much of medicinal therapy and technical medicine.

III. Introduction of Overseas Medicine

It was later overseas medicine that gave a change to the two big lines of medical thought. At the time of Emperor *Ingyo*, it was a great problem

both medically and politically whether the Emperor's body should be examined and treated by *Kompachinkan-Kim*, an overseas physician. As he successfully cured the Emperor of his disease, the dispute finally subsided. Of course it could not bring every problem to an end. And yet Kojiki hands down to a large extent the deeds of overseas physicians in addition to Izumo and Yamato medicines. The author wonders if there was a change as well. The methods of protecting man's life and health from disease never come to an end, in keeping with each other at some time, or in opposition at other. In this study the general tendency in medicine of this country has been grasped in a simplified way mentioned above.

IV. The Actual Circumstances of the Medical Care of the Middle Age

What were actual circumstances of the medical care in the *Kamakura-Muromachi* era, that is, the Middle Ages that followed the *Heian* era? (The *Heian* era is to be omitted, as it had been discussed in another paper⁶⁾).

Let us take up materials, limiting to the two essays; *Hōjōki* and *Tsurezuregusa*⁶⁾. The first describes the spread of plague. The description of the famine during *Yowa* period (1181-1182) is as follows;

“Although a variety of incantations are changed and worshipful prayers are offered, they have no effect at all”.

Shrine Shinto, *Shugendo*, (mountaineering asceticism), Taoism, and Buddhism.....each religious association or sect performed prayers to the best of the mysteries. But every effort brought no effect. Regretful feeling can be felt in reading the sentences of *Hōjōki*. To understand this pessimism the social background of the time when *Hōjōki* was written should be taken into consideration. It was in the beginning of the *Kamakura* era and was so soon after the war between the *Genji* and the *Heike* clans that the country was severely devastated.

In *Tsurezuregusa* written about a hundred years later, the post-war disorders having been settled, there was calmness among the sentences. The difference between the two writings might be attributable not only to the background of the age but also to the difference in character of the two writers, *Chōmei Kamo-no* and *Kenko Yoshida*. Anyway, *Chomei's Hōjōki* grieves

over natural disaster in general, while *Kenko's Tsurezuregusa* watches comparatively rationally at individual affairs. But the distinction is only a problem in comparison. In a great book, "A Study on Medical History in the *Kamakura* Era⁹⁾", says Toshiro Hattori, "it shows how interested *Kenko* was in medicine that *Kenko* wrote down everything he heard of medical art. It may safely be said that his deep interest arose from the fact that he was in poor health and physically weak". Following such an example of a senior scholar, the author classified medicine-related articles in *Tsurezuregusa* in a clearcut way into the two groups, incantation and technique, in this study. The results are as follows.

* Incantatory medicine

paragraph 47: When you cannot control sneezing, say "a sneeze" and you will find it gone.

paragraph 50: A story about an ogress who came up to *Kyoto* from the country of *Ise* to cause a great excitement.

paragraph 61: A story on childbirth in which they let a *Koshiki* (a steamer) drop from a high position to get *Koshi-no-ke*, demon at birth, away and to pray for a safe birth.

paragraph 68: When countrymen were attacked by robbers, the spirit of usually served Japanese radishes appeared and drove them away.

* Technical medicine

paragraph 42: A story of a person who died of a disease causing his spirit to go up.

paragraph 53: A story of a man who came to a physician in *Kyoto* to ask him to remove from his head the iron pot that he couldn't take off for himself, but was refused because of the absence of medical data for a case like that.

paragraph 107: The writer says that there are three kinds of good friend, one of whom is a doctor.

paragraph 120: He says domestic products can replace things Chinese except for drugs.

paragraph 136: A story of *Atsushige Wake-no*, a physician, (director

of the public office for medical care) being put to shame because of his ignorance of accurate *kanji* (Chinese ideograph) for "salt".

paragraph 148: A story of having a rush of blood to the head without burning moxa on the effective spots of *sanri* just below the knees.

paragraph 109: A story of *rokujo*, a drug made from pouched buck-horns, which, being smelled directly with the nose, affects the brain.

In the number of citation, the ratio of incantatory medicine to technical one is 4 : 7. The author once reported about the myths of *Yamatotakeru-no-mikoto*'s conquering of rebels described in *Kojiki*⁶⁾. There were 15 stories of his conquest. But it was found that the cases in which he really suppressed rebels with bows and arrows were only three. Holding up weapons which were magical instruments for threatening demons, and showing military prestige by gathering so many soldiers as local people had never seen, *Yamato-takeru* drove away violent demons of ill health who hid themselves in the caves of the mountains and rivers where it was dark around even in the day. In other words, it was the conquest of disease by priests. In terms of modern medicine, it was preventive medicine or prevention of epidemics.

This fact presents a contrast to skill-respecting empirical medicine of the aboriginal *Izumo* tribe. Seeing the simple ratio of the number of medicine-related paragraphs in *Tsurezuregusa*, however, it can be noticed that there was a great change in comparison to the time of *Kojiki*. Although, politically, the Yamato tribe had been uniting and governing the country, there seems to have been a tendency that professional skill was comparatively predominant in the field of medicine. This may be a natural result, seeing that there is a correlation between the changes of the times and the progress of science.

With a view to understanding the situation of technical medicine at that time, the descriptions of war chronicles are going to be investigated. For instance, *Hogen-monogatari* provides the following example in the paragraph of "The new ex-Emperor comes across the Minister of the Left". When the Minister of the Left who had never had riding experience tried to flee to *Higashiyama* on horseback, he had a stray white-feathered arrow stuck into

his left neck. Blood flew out as if it were water issuing from a bottle. *Tadamasa Heimanosuke* who was heading the troop was called back to treat him. The original says that *Tadamasa*, an army doctor, "warmed the wound". This may be taken as moxa treatment. This first aid seems to have been intended for sterilization and arrest of bleeding.

The 147 paragraph describes that they say "moxibustion is now so prevalent that divine services in *Shinto* have become profaned". This may be the evidence that the Yamato Imperial Court was rather displeased with moxibustion introduced from abroad. But seeing that *Kenko* points out, "That is not the case", the treatment is considered not to have been evaded so strictly at that time. In other words, moxibustion had come into use so widely. Shizu Sakai reports that when the ex-Emperor *Goshirakawa* became seriously ill due to a boil, opinions were divided among the court physicians as to whether moxibustion should be carried out. As a result, *Sadashige Wake-no* and *Shigenaga Tamba-no*, physicians who objected to the moxa treatment were rewarded, but *Norimoto Tamba-no* who insisted on the treatment was given no reward¹⁰. This shows that there was a sharp conflict of opinions on moxibustion. Nevertheless, *Hogen-monogatari* says that the treatment was used among warriors, which was probably because they strongly inherited the living style of the Hunting Age. Out of necessity, technical physicians followed warrior groups as specialists in military medicine. That surgical first-aid art was not extinct which was handed down by the *Izumo* tribe who had the white hare myth.

On the whole, however, incantatory medicine is thought to have been predominant. Many of literary works substantiate this fact. Nevertheless, technical medicine was steadily prevailing, which is probably due to the influences of overseas medicine.

There are many studies made by senior scholars on overseas medicine in the Middle Ages. "In the *Kamakura* era", says Shizu Sakai, "scholar priests who went over to Southern Sung brought in fragmental Chinese medicine with them. But in the *Muromachi* era those interested in medicine among civilians went over to Ming to study the medical science. They returned home and gained a reputation of a good doctor¹⁰". Shizu Sakai further describes in detail the importation of medicine.

Although the importation of overseas medicine rapidly increased like this

as compared with the previous ages, it seems that there were many who were critical of or opposed to foreign medicine. A good example of this is "An Argument on Physicians"¹¹⁾ in the third volume of *Heike-monogatari*. The Historic Romance of the Taira Family. *Shigemori Taira* refused to see the reputed Chinese doctor whom his father *Kiyomori* had sent to him, and died in the end. His chief reason was that if he had had his illness cured by a foreign physician, it would mean he had neglected Japanese physician. His thinking was based not on exclusion of the technical physicians, but on wariness of foreigners and contempt for overseas visitors and Koreans. His attitude became an object of admiration among the court and the public. The author once considered this as an example of incantatory medicine, but found it later unreasonable to think like that.

V. The Present Conditions of Medical Care and the Emperors' Life Spans

Taking such various courses as mentioned above, medical care in Japan has steadily been making a scientific progress. Let us check what concrete results it has brought on the Emperors' life spans, the records of which have the highest accuracy.

The medical art which has made a rapid progress by taking in the advanced knowledge of overseas countries should naturally have a beneficial influence upon the life spans of the Emperors and expressed itself numerically in concrete form. In the aristocratic ages, Emperors were representatives of noblemen, and the accuracy of materials preserved by the Imperial Household was outstanding even in the old days whose statistic data were quite difficult to obtain.

The important records concerning Emperors were handed down from generation to generation by the families of professional reciters even in ancient times when there were no letters. The Imperial records in a written form are the more accurate. The birth years and the death ages of successive Emperors have been investigated using the historical literature. In this paper, based on the data from the 83rd Emperor *Tsuchimikado* to the 123rd Emperor *Taisho*, regression analysis of the death age (Y) on the birth year (X) was attempted with the following result.

$$Y' = 41.24 + 0.004245x$$

The difference between the estimated regression coefficient here and 0 did not reach the statistically significant level.

($t=0.316$, d.f.=37)

In the next step, quadratic regression analysis was carried out and the following equation was obtained.

$$Y'' = -298.60 + 0.4638x - 0.000152x^2$$

The difference between either regression coefficient (b_1 , b_2) and 0 also did not reach the statistically significant level.

Although either result of linear regression analysis or quadratic one fell short of the significant level as stated above, the distribution of the birth years and the death ages from the 83rd Emperor through the 123rd Emperor and the linear regression line are shown in **Fig. 1**. As the figure explains, the variance of death age is so large irrespective of birth year that both linear regression and quadratic regression are included in this variance. As a result, there is no difference between either regression coefficient (b_1 , b_2) and 0^{zero}, which results in the horizontal tendency. Accordingly, the life spans of the Emperors in the Middle Ages are considered to have nothing to do with the changes of the times.

The author reported the findings obtained by making a similar analysis of the data about the 29th Emperor *Kimmei* through the 82nd Emperor *Gotoba* in *The Ancient Medical Thought and the Emperor's Life Span*¹²⁾ in 1986. The linear coefficient of regression obtained in the previous study was negative, while the coefficient of regression in the Middle Ages, though insignificant, shows a positive tendency, which suggests that Emperors' life spans were getting longer with the change of times.

According to Toshiro Hattori's studies⁹⁾, Emperors' average death age of the *Heian* era was 42.9, and that of the *Kamakura* era 44.0. He pointed out that the life spans of the Emperors of the *Kamakura* era were longer than the previous era. Based on *A Chronological Table of the Great Japan* by Zennosuke Tsuji, Hattori calculated people's average death age of the *Muromachi* era as follows.

The average death age from the first year of *Oei* to the third year of *Entoku*.....61.09 (on 478 persons). The average death age from the first year of *Meio* to the third year of *Genki*.....60.80 (on 263 persons).

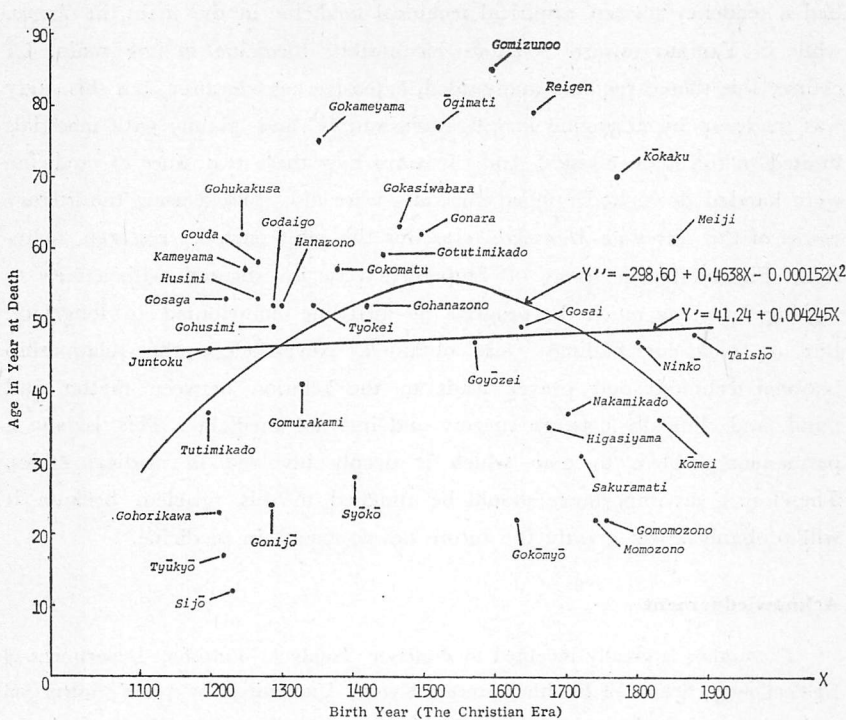


Fig. 1 Change in Emperor's spans of life, from Emperor Tutimikado to Emperor Taisho

The average death age from the first year of *Tensho* to the third year of *Keicho*.....59.5.

He clarified that the average death age of the *Muromachi* era was about one year fewer than 61.4 of *Kamakura* era's¹³⁾. It is unusual that the average death age of the *Murōmachi* era got fewer than that of the previous era, a phenomenon going against the current of history. But this might be the very extraordinary phenomenon due to the prolonged disturbances of civil war.

Summing Up

The medical thoughts at the time of appearance of the earliest literature

had a tendency toward empirical technical medicine in the main in *Izumo*, while in Yamato toward religious incantatory medicine in the main. Of course, this theme requires many-sided, extensive consideration, but this study was made up by arranging investigations simply and plainly with materials limited to the main classics. And the ways how these two lines of medicine were handed down and applied clinically were also studied using the literary works of the *Kamakura-Muromachi* eras, for the most part, as research materials. Finally the life spans of Emperors were investigated with a view to making sure how much the progress of medicine contributed to longevity. But no clear-cut findings were obtained. Nevertheless, the relationship between technique and prayer leads to the relation between matter and mind, and clinically between surgery and internal medicine. This is also a permanent problem to man which is deeply involved in medical ethics. Therefore great importance should be attached to this problem because it will probably affect greatly the future developments in medicine.

Acknowledgement

The author is greatly indebted to Professor Toshiyuki Furusho, Department of Epidemiology, School of Health Sciences, Kyorin University, for years' instruction and guidance for this study. He would like to express his heartfelt gratitude by making special mention here.

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