Helmut Kogel

The secret of kyusho jutsu: neuroanatomical basis

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MEDYCYNA, ZDROWIE I SPRAWNOŚĆ / MEDICINE, HEALTH & FITNESS

Chief of the Department of General and Vascular Surgery, Vascular Center Lippstadt, Dreifaltigkeits Hospital gem.GmbH Lippstadt- Germany Regional Director IMAF Germany.

5. Dan Shotokan Karate Renshi; 4. Dan Kobudo; 2. Dan Nihon Jujutsu; 1. Antas Arnis.

HELMUT KOGEL

Vascular Center Lippstadt,

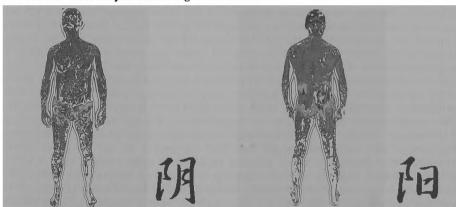
Dreifaltigkeits Hospital gem.GmbH Lippstadt-Germany Regional Director IMAF Germany

The secret of kyusho jutsu – neuroanatomical basis / Tajemnica kyushojutsu – neuroanatomiczne podstawy

Key words: Kyusho Justu, acupuncture system, weak points, neuroanatomical correlations

Introduction

The following theories are based on long studies comparing modern western medicine with traditional Chinese Medicine (TCM) in respect of meridians and acupuncture points. The main recognition is the correlation between Yin and Yang. One meaning of Yin in Asian view corresponds to our imagination of the inside, that means the anterior aspect of the human body. The backside of our body is called Yang in Asian view.



anterior view is Yin / widok z przodu to Yin posterior view is Yang / widok z tyłu to Yang

But another meaning of Yang seems to correlate with the sympathic system of the autonomous nerves in western medicine. This nervous system cannot really be influenced by our will. Other correlation can be seen with Yin. This part of Acupuncture System seems to correlate to the parasympathic system in Western medicine, it's the counterpart of the sympathic nerves. These two nervous antagonists are controling the hole body, the inner organs, the thermoregulation and much more. The meridians use arteries, veins, lymphatic vessels and nerves for their way on the surface and through the inside of our body. Through special channels on the skin surface, the so called acupuncture points we can reach these Meridians and with them our autonomous nervous system and the inner organs. The secret of the effect by needling or by massage is a change of electrical stimulation in these Meridians. The vegetative autonomous nervous system, that means the sympathic and parasympathic system, which is leading this electrical energy, has the main importance for the effects in Acupuncture and in Kyusho. The

knowledge of the anatomical roads, which are used by the meridians, enables us, the Western medical doctors, to understand the old art of Chinese acupuncture easier. It's a bridge to the modern Western medicine. The folding of the blastula and the evolution of an embryo show the way of the segmental nerves running with the several organs from the outside to the inside of the body. The inner organs take their nerves with them to the inner side of the body like telephone cables.

In Kyusho Jutsu the acupuncture points are stroken or pressed in order to interrupt the flow of energy (Ki) in these meridians, or to send more Ki into different or opposite direction. In most cases of Kyusho strikes we can induce an opposite effect compared to acupuncture. This is the secret of sudden or delayed malfunction or death. It differs from our western view. In western view we see only a direct physical damage after special attacks, nothing more. In Kyusho the most important aim is to induce a damage to the function of different inner organs. Asian martial artists know different grades of malfunction: Alteration of conciousness, paralysis, immobilisation, sudden death or delayed malfunction or death. Some of the following explanations are proved, others are of hypothetic nature. But with these theses it is very easy to understand the different effects of acupuncture and Kyusho. It is a result of a more than 30 years long personal study in modern Western and a lot of years in Asian acupuncture medicine. It gives new insights for medical doctors and martial artists.

Historical Evolution of Kyusho Jutsu

It is very difficult to look back to the evolution of Kyusho Jutsu. Most of the experts of the past have made no records of the application of vital points in Asian Martial Arts. Since the beginning, probably 1300 B.C., they gave the experiences of these secret techniques from hand to hand and from master to intimate student (uchi deshi), and to members of the own family. Kyusho Jutsu is intensively combined with the acupuncture model of the traditional Chinese medicine (TCM). Origins can be also detected in India. The knowledge of healing by acupuncture was first, the martial art application of this system appeared later. May be, such system of vital points should have been developed for the first time in 1300 B.C. from Zhang San-Feng and was called Dim Mac (Erle Montaigne). Zhang was an eremit from the Wudang Mountains. He should have tested the effect of strikes and pressure points according to acupuncture doctrine first in animals, later on also in humans. Zhang who lived in the province of Hopei was so impressed by the results of his techniques, that he probably feared to make records of his knowledge. He transfered his knowledge only to members of his family and hid some techniques in dance like movements, called hao ch'uan. Lateron it developed to Tajjiquan. The first records derived probably from his student Wang T'Sung Yeuh (Erle Montaigne, R. Habersetzer). Probably lateron this knowledge was brought to some monasteries of Buddhism. The monchs were intensively engaged with both, the healing art and the secret fighting techniques. The development of the poisoned hand, the so called Dianxue (Xue = cavity, bloodflow) began to start. The name of Dianxue has its origin in the delayed effect of blows, that means hours or days later. The effect depends also on the diurnal flow of energy (Ki) through the Meridian channels time by time different styles occurred, such as Shaolin Kenpo (or Chinese Kenpo). It was know as a very strong style and has influenced the Okinawa style of Shorin Ryu later on. The other system, called Yang stile possessed more tender movements and influenced probably the Goju Ryu stile of Okinawa. The Ryu Kyu islands have been specially predisposed for cultural exchange between India, Japan and China, caused by the geographic position, near to Taiwan and China. This was also important for the Martial Arts, which have been used for self defence. Nowadays during journeys through Okinawa the intensive cultural exchange can also be detected in architecture, gardening art, living design and in the appearance of different people deriving from China, Japan, Philippines and some other lands. In Okinawa in former times a special form of selfdefence existed, called Ti (or Te). This system has been influenced in 1400 P.D. by elements of Shaolin Kenpo (Chinese Kenpo). Also this art has been given hand to hand and has not been noted down. There is a correlation between these fighting arts and the Buddhism, which came by the Indian monk Dharuma (in India Bodhidharma) to China in 520 A.D. He became known by his technique of meditation (Za Zen). It is said that he remained sitting in this position for nine years. His theory became known under the name of Ekkinkyu. Two books have been found in the

Shaolin (Shoriji) temple called Ekkinkyu and Senzuikyo. The content of Ekkinkyu has been brought from different masters to the inhabitants of Okinawa, it was called Shorinji Kenpo or Chines Kenpo. The Ekkinkyu has been combined with the self-defence system of Okinawa. This was the development of Okinawa Te (T. Hokama). The correlation of Buddhism and Karate is partially in doubt of some authors. Master Arakakis opinion is, that two styles came from China to Okinawa, that means Shorin Ryu and Shorei Ryu, which took lateron influence onto other styles. Since a long time fighting arts have been intensively connected with healing arts. This is known in India, China, Okinawa and later on also in Japan. Healing methods and revival techniques could develop like Kappo, Kuatsu, Jin Shin Jyutsu and many others. Healing methods are important to prevent and to cure injuries. It's a pitty, that the knowledge of the traditional healing methods has been more and more forgotten and has been forced out by modern western medicine also in Japan. In our view it is a mistake because these two methods of Asian and western world are not competative arts, they supplement each other. The western medicine is concentrated to the treatment of damages of organs. the traditionel Chinese medicine is occupied predominantly with malfunctions, dysregulations of different organs. TCM has more prophylactic character compared to western medicine. Also in Okinawa the fighting techniques on vital points have been trained concealed. Okinawa has been occupied by several enemies. There has been an embarquement to have weapons in 1470 and 1609 P.D. The secret techniques have been practiced in different dances, so called Odoris. It was a similar reaction as in former times in China. Very important records concerning to Martial Arts can be found in the so called "Bubishi". There are only few copies, which have been written by hand from original books of China. Because the copy was handmade, some mistakes could happen. Nowadays it is very difficult to analyse the different but similar copies. Gichin Funakoshi has quoted essential parts of the "Bubishi" in his books, deriving by ancient Chinese masters. One of the first masters, who made progress of Okinawa Te, was Sakugawa Kanga (born 1735 P.D.). Matsumura Sokon (born ~ 1796) studied Martial Arts of Sakugawa and of the Chinese Master Kong Shu Kung, the creator of the Karate Kata Kushanku (later on called Kanku Dai). He had some well known students, such as Itosu Anko, Kuwate Ryusei, Yabu Kansetsu, Hanishiro Chomo, Kyan Chotoku and Gichin Funakoshi. It is very interesting to make studies about the conceiling of Kyusho techniques step by step by reading chronologously and analysing the books of Funakoshi, Funakoshi has been encouraged by Jigoro Kano to create with Karate a similar system as Kano did with Judo. The martial arts should be changed. It was necessary to take them out of the system of self-defence and transfer them into a system of physical training, confirming the character and to create a possibility of sportive competition without danger of severe injury. Jigoro Kano initially was stimulated by the German Professor Dr.med.Erwin Bälz, who was teacher in the university of the Japanese emperor in Tokyo. Kano should create a system for physical education by elements of the old Jujutsu following the example of "Turnvater Jahn" in Germany. In the following years Kano and Funakoshi formed with Judo and Karate a new system, which derived from the old Jujutsu. This was a great intellectual effort. These systems should be changed into sports without danger. In Karate traditional Katas have been modified and realistic applications have been rendered less harsh. The training has also to be changed and the secret dangerous techniques have not been shown any more to the students. Only in some old Katas we can reconstruct Kyusho techniques by comparing different stiles and the applications (Bunkai). In this sense Kyoshu techniques (strikes onto vital points), Tuite- or Torite techniques (pressure point techniques and distortion of joints) are hidden in Katas. One of the first books of Funakoshi is called To Te Jutsu. Here You can find an old form of the Kata Kushanku. It was brought to Okinawa by a Chinese Kempo master in 1761. He was minister of the Ming emperor Shu Kung (in Japanese language: Kosokun). This Kata was used to form lateron Kanku Sho and Kanku Dai in Shotokan Karate. In Shorin Ryu stile this Kata is known as Kusanku. Kusanku is probably the original Kata, because more realistic techniques can be seen comparing to Shotokan stile. Moreover Funakoshi shows in his old books exercises with a partner with more realistic applications. When practicing a Tsuki he withdraws the other hand and holds the partner. Nowadays the hand is withdrawn to the hip only symbolically (G.A.Dillman). The Karate techniques have been changed and realistic applications have been hidden step by step in late books of Funakoshi. Following the tradition of the Samurai, the lesson has been divided into Shodan (basics), Chuden (advanced techniques) and finally Okuden (secret techniques). Nowadays techniques of Kyusho Jutsu

are kept hidden for most Karate masters. There are only few teachers, who studied these secrets or have been instructed by Japanese masters. Menkyo Kaiden (master qualification) is a degree for few selected masters. Kyusho Jutsu cannot be understood without profound knowledge about the anatomy of the human body and the knowledge of the acupuncture doctrine. That's the reason why techniques are often been accused to be a quack. But the real essence of Ryu Kyu Kenpo is the Kyusho Jutsu. It can be shown very impressively by some old Okinawan masters.

3. The Meridian System

The most simple method of acupuncture is at least 5000 years old. People has probably detected the relief of pain by massage of painful areas. First they used their hands, lateron they used needles made of wood or stone. It seems to be, that there was also a well developed system of acupuncture in Europe in 3200 B.C. This could be proven, when experts examined a mummy found in a glacier Tirol. The mummy has been called "Ötzi". This man showed special tatoos, which remembered of acupuncture points. Special needles of stone have been found in China. These needles derived of a time of the so called yellow emperor (2698-2598 B.C.). The first acupuncture techniques have been called acupuncture of "locus dolendi" because the have been concentrated to the maximum point of pain. Thereafter this simple technique developed into a more complex system, that means acupuncture took place in points of the body, which were located in a long distance to the origin of pain or malfunction. Chinese people discovered signals from the inside of the body coming up on the surface of the body in special points. They learned that the opposite way from the outside to the inside was also possible. They began probably with stimulation by needles into defined points on the surface in order to reach inner organs and to change their functions. Step by step they detected models of combinations of points, which refered directly to inner organs. Several generations of healers found out empirically some interrelated flow of energy (Ki) on the surface of the body. Later on they called it Jing (in western language meridians) and Luo (in western language junctions). In the western world we call it acupuncture points. But this is not correct. In Chinese language it is called Xue (Zü), that means channel. These channels are small areas on the surface of the skin, measuring 0.5 to 5 mm in diameter. They can be detected by distinct turgor of the skin and by special electrical conductivity. They are connecting channels to the inner flow of energy. Predominantly they are laying over the paths of nerves, veins, arteries and lymphatic vessels. They relay probably to the autonomous nervous system. Blood and lymphatic vessels are also wrapped by a network of autonomous nerves. This is the way of contact to inner organs. The function of the meridians and their organs are arranged in the so called Yin and Yang, according to the typical Chinese doctrine. In western medicine it seems to be. that Yang corresponds to the sympathic nervous system and Yin to the parasympathic system.

+	19 Yang	Symptoms / Examples for the influence of Sympathicus and Parasympathicus	妈 Yin	+
	superficial, dull headache type, hangover	pain	dull pain, teeth burr type	
	impairing	blood flow	improving	
	accelerating	heart beat	slowing down	
	viscous and smelling e.g. sweat during fear	perspiration	delute, lesser smell e.g. after physical work	
	paralysing	intestine	enhancing	T
	promoting	restlessness, fear	Calming down	
+	Sympathicus		Parasympathicus	+

Fig. 1. Correlation between autonomous nervous system and Yang and Yin / Ilustr. 1. Korelacja pomiędzy autonomicznym układem nerwowym a Yang i Yin

In Chinese Medicine the functions of Yin and Yang are seen in a different way compared to western medicine. They discriminate an overload and a lack of energy (Oi). Acupuncture technique has to regulate and to harmonize this energy in case of imbalance. In respect of this traditional Chinese medicine is able to regulate very skilfully malfunctions of human body. It is more effective than in Western medicine, where receptors of the autonomus system are treated by drugs. The autonomous nervous system cannot be intentionally influenced. But nevertheless in autogenous training and meditation we are able to get partially influence onto this nervous system. In respect of the correlation of autonomous nervous system in western medicine and the the function of Yin and Yang in asian medicine we can get a better understanding of the acupuncture model. Until recently it was impossible to show anatomic structures by microscope, which may belong to meridians and acupuncture points. But Hartmut Heine, Professor of Anatomy in Witten/ Herdecke Germany found some strange pearlstring like endings of nerves under the skin during his work. These endings perforate the fascia in regular distances. Later he discovered the connection to the acupuncture channels and Meridians. In my opinion the relation of the acupuncture model to the autonomous nervous system can be the key for understanding in Western view and is a bridge between traditional Asian and Western medicine.

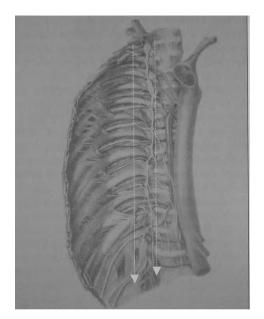
Twelfe main meridians are known, six Yin meridians and six Yang meridians, futhermore there are eight Extra- meridians, four Yin and four Yang. When the body is bend down Yin is located on the inner side of the body. The inner side belongs to the shadow, the darkness and the moon. Yang is located on the outside of the body, it belongs to the light, the brightness and the sun.

Moreover nowadays 1500 Extra- points are known, so called new points. They are in the neighbourhood of the well known old points of the acupuncture system. These points are not of great importance in Kyusho Jutsu, because in real fight a strike cannot differentiate between these neighbouring acupuncture points. This is the main difference between a needle in acupuncture technique and the fist or hand in Kyusho Jutsu. But one aspect is of great importance. The form of the hand in attacks and the exact angle of a blow or a kick is crucial for the outcome in a real fight situation and for the desired effect.

4. Neuroanatomical Connections between TCM and modern Western Medicine

Inside of the neck and the mediastinum there are connections to the Heart-, the Pericardium- and the Lung via the cervical Sympathic Chain. The Sympathic chain and Parasympathic Vagus nerve are close together and exchange a lot of nervous fibres. The Sympathic nervous system belongs in Chinese Medicine to the Yang part, the Parasympathic system to the Yin part. There are also connections to the Triple Warmer- and to the Stomach Meridian. They take their way with the nerves and the vessels into and out of the thoracic opening in the cervical region (cervical plexus). The Sympathic Chain (Yang) spreads on both sides of the Vertebral column. Fibres are running to the cervical plexus and in the chest to the intercostal nerves. In the lumbar region fibres go with segmental and big nerves (N.ischiadicus and N.obturatorius). There are three big centers where autonomous nerves are concentrated and switched: The Plexus bronchocardiacus, the Solar Plexus and the Mesenteric, hypogastric and pelvic Plexus. In Chinese medicine it seems to correlate to the upper Warmer (upper Jiao), the middle Warmer (m.Jiao) and the lower Warmer (Jiao).

The Vagus Nervous System (Yin): The Vagal Nerve enters the thorax from the cervical region and spreads into different directions for the Stomach-, Gallbladder-, Liver- and Small Intestine. Connections between intercostal vessels and the organs have probably contact to the meridians on the surface of the body. Also Sympathic nervous fibres (Yang) take their way through these regions using the running of the nerves. The Vagal nerve prefers the way with blood and lymphatic vessels. There are anatomic connections between the Carotid Artery (Sinus Nerve), the Hypoglossal Nerve, the Plexus Cardiacus, the Stomach, the Liver and the Gallbladder. The Liver-Meridian has probably connections from outside to inside via intercostal nerves. In the peripherial area a microscopical and histochemical differentiation between Vagus and Symathicus cannot been made. In the bowel there are two different autonomous plexus (Myentericus and Auerbach).





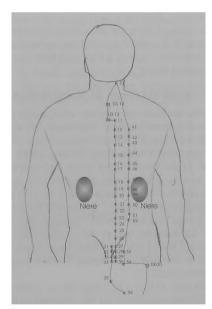
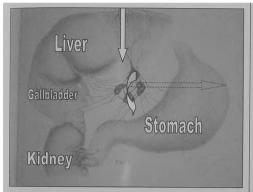
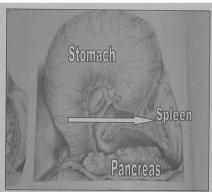


Fig. 2. The segmental formation of the thoracic sympathic chain (inside) / Ilustr. 2. Segmentowa budowa

It is arranged in two parallel rows of perforating fibres besides the vertebral column. These two rows of perforating branches through the thoricic wall correlate to the Bladder Meridian on the surface of the back. The sympatic chain runs with the segmental vessels (veins and arteries) to the anterior surface and has more connections to other Meridian points such as Gallbladder-, Stomach-, Spleen-, Kidney-, Liver- Meridian



The Vagus nerve is going to the Liver, the spleen, the Pancreas, the gallbladder and the Kidney



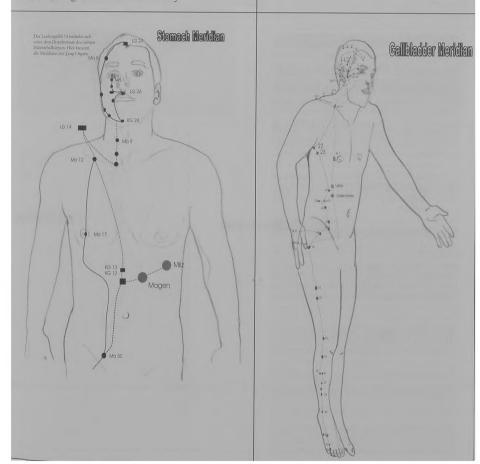


Fig. 3. Vegetative connecting fibres between Liver, Gallbladder, Stomach and Spleen. Parasympathic fibres (Yin) are dominant. The solar plexus contains both, sympathic and parasympathic fibres. The Solar Plexus is the middle Jiao. The Spleen Meridian has probably connection from outside to inside via intercostal nerves / Ilustr. 3. Włókna wegetatywne agcage wątrobę, woreczek żółciowy, żołądek i śledzionę. Przywspółczulne włókna (Yin) dominują. Splot słoneczny zawiera zarówno współczulne jak i przywspółczulne włókna. Splot słoneczny jest środkowym Jiao. Meridian trzustki ma prawdopodobnie połączenia z zewnątrz do wewnątrz za pośrednictwem nerwów międzyżebrowych.

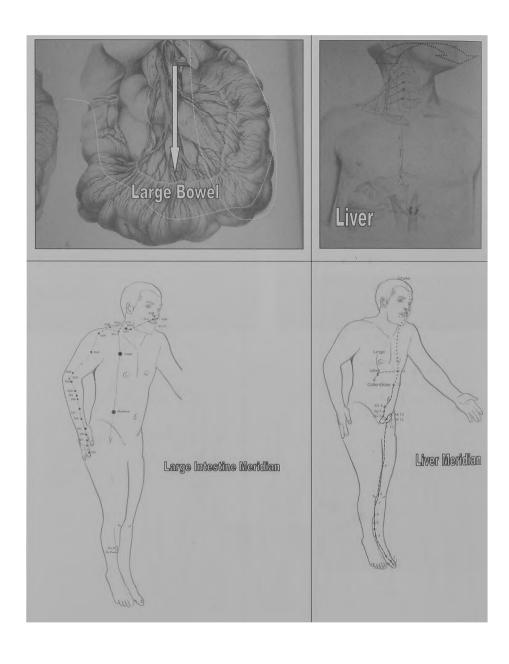


Fig. 4. Vegetative fibres to the Small and Large Intestine and the connections to the upper visceral organs via Vagus Nerves. The Large Intestine Meridian enters the body probably via the mouth, that means the Hypoglossal Nerve and from here via Vagal Nerve into the Mediastinum / Ilustr. 4. Włókna współczulne prowadzące do cienkiego i grubego jelita oraz połączenia z górnymi organami trzewiowymi poprzez nerwy błędne. Meridian jelita grubego rozpoczyna się w ustach, a to oznacza nerw podjęzykowy, stąd prowadzi poprzez nerw błędny do śródpiersia

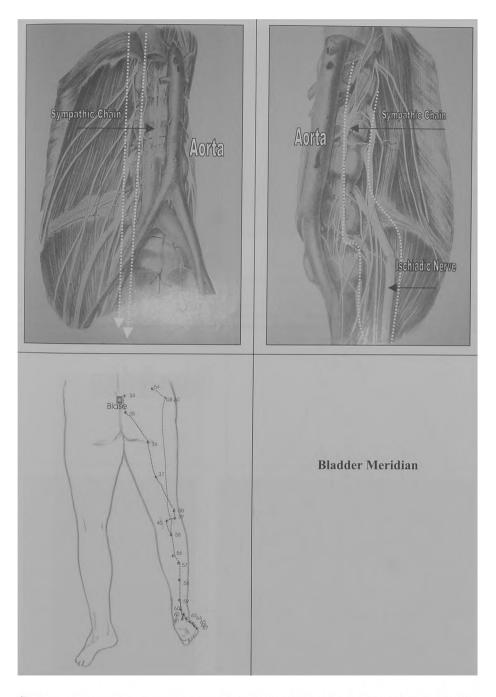


Fig. 5. The relationship of the lumbar sympathic chain to the Bladder Meridian on the surface of the back and the connections to the Ischiadic Nerve with his course to the leg (also Bladder Meridian) / Ilustr. 5. Związek lędźwiowego łańcucha współczulnego z meridianem pęcherza na powierzchni pleców oraz połączenia nerwu kulszowego biegnącego wzdłuż nogi (również meridian pęcherza)

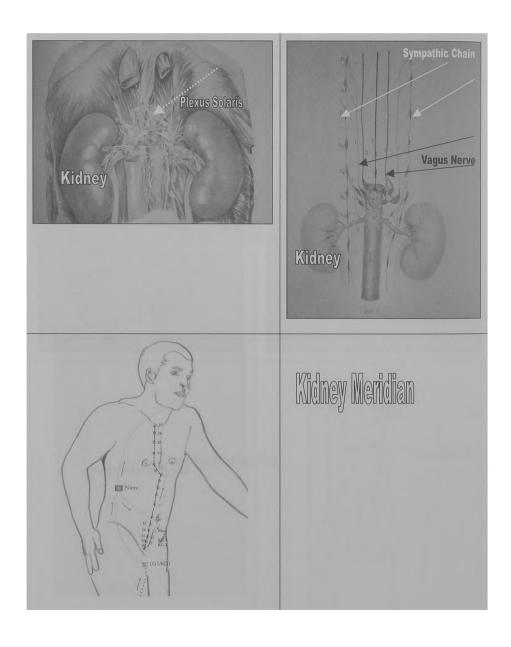


Fig. 6. The Plexus Solaris is the place of the middle Jiao and contains sympathic (Yang) and parasympathic fibres (Yin). It is one centre of coordination for the inner organs (Liver, Gallbladder, Stomach, Spleen, Pancreas, Kidney) / Ilustr. 6. Splot słoneczny jest miejscem środkowego Jiao i zawiera współczulne (Yang) oraz przywspółczulne (Yin) włókna. Jest to centrum koordynacji organów wewnętrznych (wątroba, woreczek żółciowy, żołądek, śledziona, trzustka, nerka)

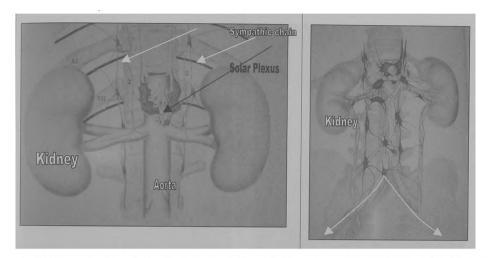


Fig. 7. The vegetative center of the middle Jiao (Plexus Solaris) is connected with the lower Jiao (Plexus Hypogastricus and Pelvicus) by autonomous nerves net. It is running with the blood vessels to the groin and than into the leg. Probably it has connection to the Obturator nerve / Ilustr. 7. Centrum wegetatywne środkowego Jiao (splot sloneczny) jest połączone z niższym Jiao (splot hipogastryczny i miednicowy) za pomocą autonomicznej sieci nerwowej. Biegną one naczyniami krwionośnymi do pachwiny, a dalej do nogi. Prawdopodobnie mają połączenie z nerwem mięśnia zasłaniającego



Fig. 8. Connections between the middle and lower Jiao. The spread of the Presacral- and Pelvic Plexus / Ilustr. 8. Polączenia między środkowym i niższym Jiao. Zasięg splotu miednicowego i przedkrzyżowego

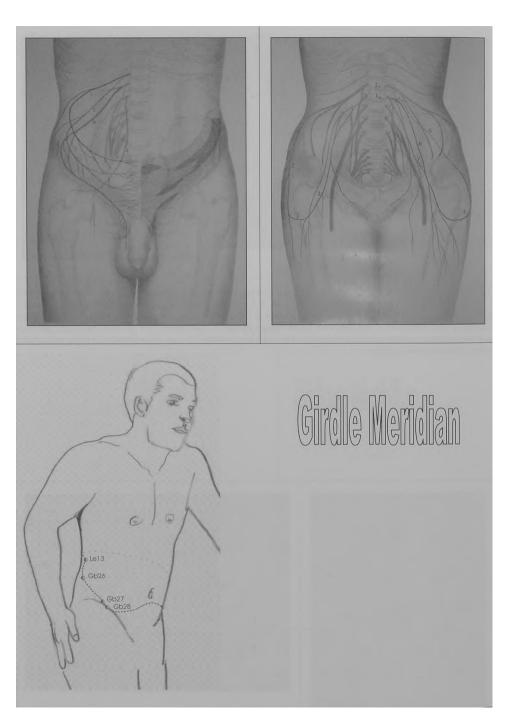
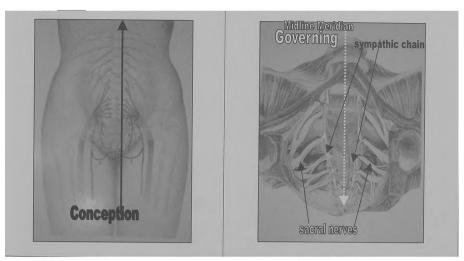


Fig. 9. The spread of the peripheral nerves in the lower abdomen and the inguinal region. There is a correlation to the Girdling Meridian and other Extra Meridians / Ilustr. 9. Zasięg nerwów peryferyjnych w dolnej części brzucha i w rejonie pachwiny. Są one powiązane z meridianem otaczającym i innymi dodatkowymi meridianami



Anterior outside view

View inside into the pelvis

Fig. 10. The pelvic, inguinal and perianal region. Dense structure of autonomous nerves. The Sympathic chain correlates to the Bladder Meridian. There are connections to the midline, wich are sampled into the Conception- and the Governing Meridian / Ilustr. 10. Rejon miednicy i pachwin. Gęsta struktura autonomicznych nerwów. Łańcuch współczulny jest powiązany z meridianem pęcherza. Istnieją połączenia z linią środkową, które mają swoje odnośniki w meridianie zarządzającym i konceptu

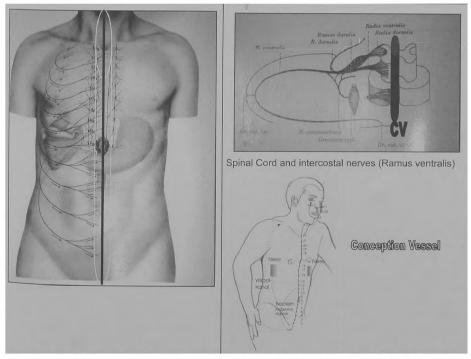


Fig. 11. The spinal cord sends nerves to the anterior area of the body. Both sides are connected in the anterior midline. The electrical conjunction of these nerves result in the Conception vessel / Ilustr. 11. Od rdzenia kręgowego nerwy prowadzą do przedniego obszaru ciała. Obie strony są połączone w przedniej linii środkowej. Elektryczne połączenia tych nerwów tworzą naczynie konceptu

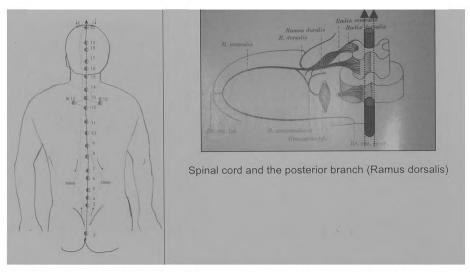


Fig. 12. The posterior branches of the segmental nerves coming aut of the spinal cord on both sides of the body are connected on the midline of the back to the electrical phenomenon of the Governing vessel. The Extra- Meridians use points of the regular Meridians. They have to connect them and are responsible for the Ki Balance / Ilustr. 12. Tylne odgałęzienia nerwów segmentalnych wychodzących z rdzenia kręgowego po obu stronach ciała są połączone na linii środkowej z tyłu naczynia zarządzającego. Dodatkowe meridiany wykorzystują punkty normalnych meridianów. Muszą je połączyć i są odpowiedzialne za równowage Ki

5. The Mechanisms of Kyusho Jutsu

These just demonstrated neuroanatomical correlations between inside and outside of the body are not only the base of acupuncture system, but also of Kyusho (or Dim Mac). Blows to the main Kyusho Points cause an electrical phenomenon, which induces a change in inner organs and in the brain. There are a lot of combinations with terrible consequences. Some are mentioned in the "Bubishi". But an nearly an unlimited number of other combinations is possible. In the science of Dian Xue several effects can be differentiated:

1. Hun Xue blows cause unconciousness

2. Hia Xue hits cause numbness, reaction is impossible

3. Ma Xue blows can induce paralysis

4. Si Xue strikes can cause deadly complications

5. Mu Xue delayed death (intensive dependence on the diurnal rhythm (sichen)

In Western sight we think only about the physical damage of an attack. But the knowledge of acupuncture points makes other effects possible as described above. It is dangerous to play with these combinations, using so called set up points and final blow points. It is very important to know also the antidots after such special attacks to inhibit worse illness of the opponent. In "Bubishi" seven restricted zones are mentioned, which should never been attacked. In Jujutsu it is very easy to apply Kanstsu Waza (joint manipulation), Osae Waza (immobilization techniques) and Ate Waza (strike techniques) with these acupuncture pressure points. These techniques are hidden in modern katas in order to prevent a damage for the Uke. Exercise with pressure point techniques are only allowed for advanced students under the supervision of an special expert. Otherwise late damages can occur. In modern western medicine in most cases a treatment is not possible. The imbalance of the meridians can only be treated by specialists in Traditional Chinese Medicine and acupuncture.

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Słowa kluczowe: Kyusho Jutsu, system akupunktury, słabe punkty, powiązania neuroanatomiczne

STRESZCZENIE

Sekret Kyusho Jutsu może być powiązany z zastosowaniem teorii akupunktury. Jego efektywność nie opiera się na fizycznym zniszczeniu, lecz na fenomenach o wymiarze elektycznym. Dawne sztuki waki o rodowodzie chińskim przed wielu już laty dotarły na Okinawę; tak też narodziło się Kyusho Jutsu, w znacznej mierze bazujące na tradycyjnej chińskiej medycynie. Techniki Kyusho nie wymagają wiele siły. Ataki osłabiają ciało i mogą powodować m.in. utratę przytomności, paraliż, niezdolność do reakcji, utratę zdolności ruchu i opóźnione reakcje w różnych organach. Wiedza, jaką dysponuje zachodnia medycyna pomaga w zrozumieniu mechanizmów działania Kyusho Jutsu. W niniejszym artykule struktury anatomiczne w ujęciu medycyny Zachodu poddane zostały analizie pozwalającej wyjaśnić związek pomiędzy Yang i sympatycznym układem nerwowym oraz pomiędzy Yin i układem parasympatycznym. Uwzględniając powyższą relację łatwiej zrozumieć zarówno Kyusho, jak i teorię meridianów.

(oprac. R.R)