

Could Postsurgical Nosocomial Cellulitis be Treated without the Use of Antibiotics?

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Abstract

Introduction: Cellulitis is an infection of the skin that typically occurs after a break in the epidermis. As surgery is a major risk factor for any type of skin infections, nosocomial cellulitis is a common postoperative complication. The main source of cellulitis infections is found in two strains of bacteria: *Streptococcus* and *Staphylococcus*.

Purpose: The purpose of this study is to demonstrate that postsurgical nosocomial cellulitis can be treated without the use of antibiotics

Case Report: A Case report of a patient D. S., 36, male, who broke his leg in a motorcycle accident. After one week, he underwent a surgical operation to fix the bone using a tibia intramedullary nail. Prophylactic antibiotic was routinely prescribed, as well as the continuous use of anti-inflammatory medication. Two weeks later, he started to feel pain, hyperemia, edema and a purulent secretion in the surgical scar. Despite several new antibiotics, the infection would not stop progressing. A laboratory test showed *Staphylococcus aureus*. With no improvement, the patient sought another kind of treatment, consisting of eliminating all allopathic medication, starting acupuncture sessions, Chinese dietary counselling and homeopathic medication.

Findings: He started to improve immediately during the treatment. The pain diminished, the secretion dried, and the reddish swelling disappeared.

Conclusions: The conclusion of this study is that we can treat postsurgical nosocomial cellulitis without the use of antibiotics. To achieve this goal, the treatment was based on observing the energy imbalances of Yin, Yang, Qi, Blood and Heat Retention and treating the patient's imbalance through acupuncture, dietary counseling and homeopathy. Hippocrates once said, 'It is far more important to know what person the disease has than what disease the person has'. An Einstein quote was also considered by the physician in the treatment's reasoning: 'we cannot solve our problems with the same thinking we used when we created them'.

Keywords: Nosocomial Cellulitis; Antibiotics; Energy; Traditional Chinese Medicine; Acupuncture; Diet; Apex Ear Bloodletting, Homeopathy; Postsurgical Infection; Galen; Hippocrates; Albert Einstein; Arndt Shultz's Law

Introduction

Cellulitis is defined as a skin infection, usually associated with breaks on the integrity of the skin, such as cuts, small wounds or incisions due to surgery. Nosocomial Cellulitis is specifically related to surgery patients, with large or multiple incision spots, more vulnerable to the action of the bacteria related to the disease. Most cellulitis infections are caused by one of two strains of bacteria: *Streptococcus* and *Staphylococcus*, although other types of bacteria may also be responsible [1].

These two types of bacteria are responsible for the majority of the cases, although they are present on the skin of most healthy individuals. Naturally, individuals have different types of bacteria on the skin, this phenomenon is called "normal flora" and it is important for the maintenance of the immunity system and health. However, when these bacteria have access to deeper layers of the skin, they start an infection, which can be cellulitis [1].

The treatment is, in the majority of the cases, based on the use of antibiotics, which are chosen according to the laboratory exams to identify the type of bacteria. The treatment is, in the majority of

the cases, based on the use of antibiotics, which are chosen according to the laboratory exams to identify the type of bacteria. In serious cases, admittance to the hospital and intra-venous antibiotics may be needed. For most people 1 - 2 weeks of antibiotic should be adequate to control the infection and prevent more serious complications [1].

As cellulitis is associated with breaks on the skin, surgery is a major risk factor. Another risk factor is poor wound care. The side of the wound has no relation with the risk of cellulitis. A healthy person, however, can fight the infection easily. A weakened immune system increases the possibility of cellulitis, as does advanced age. Diabetics are also particularly at risk of acquiring the disease [1].

The main symptoms of cellulitis are redness around the incision area, pus, pain and heat. Cellulitis usually results in a red and painful area of skin, starts abruptly and quickly becomes larger. Serious infections are often accompanied by the feeling of weakness, fever and chills. The disease is more common on the legs, but it can appear on any spot of infection. If not well treated, cellulitis can also become a serious systemic infection called sepsis [1].

Purpose of the Study

The purpose of this study is to demonstrate that we can treat post-surgical nosocomial cellulitis without the use of antibiotics.

Case Report

The method used was the description of a case report of a patient D. S., 36, male, that broke his leg in a motorcycle accident. He was riding through the mountains of Serra da Canastra, in Brazil, along with his friend, who was on another motorcycle. In the accident, his leg buckled and it was possible to see the piece of bone beginning to point beneath the skin. As he had fallen in a place inaccessible to cars, ambulances, or even cellphone access. He was taken directly to a hospital in Franca (the city where he lives), which was 3 hours away from the accident. After one-week admittance, he underwent a surgical operation to fix the bone using a tibia intramedullary nail. A prophylactic antibiotic was routinely prescribed, as well as the continuous use of anti-inflammatory medication. Two weeks later, he started to feel pain, hyperemia, edema and a purulent secretion in the surgical scar. Despite several new antibiotics (Cephalexin, Cephalexin plus Garamycin and Ciprofloxacin), the infection would not stop progressing. Laboratorial exams showed *Staphylococcus aureus*, in the secretion generated by the incision's infection.

The doctors were so disturbed with the complication that they even thought about the possibility of removing the tibia intramedullary nail placed to fix the fracture, because they were thinking of an infection caused by the placement of the nail.

The patient was an accountant, who had an accountant partner, who recommended another medical infectologist, who had an approach in Traditional Chinese Medicine approach. He accepted the recommendation.

At the appointment, he described the whole process from the accident to the surgery and his hospitalizations, and affirmed that the pain, the swelling, the discharge from the purulent secretion, were only getting worse with the current treatment. After understanding the whole process, the doctor oriented him to stop taking all allopathic medication, anti-inflammatory and/or antibiotic. She advised him to avoid the intake of all dairy products, mainly when the cheese was melted, also avoid chocolate, fried foods, eggs, honey, coconut, pepper and alcoholic beverages. In addition, she advised him to avoid taking frozen liquids and raw foods. The patient had a habit of ingesting all the foods mentioned and used to drink beer frequently. At the beginning he did auricular acupuncture sessions with mustard seeds every day performed with apex ear bloodletting, within the improvement of the treatment, the sessions were reduced for twice a week. Homeopathic medications (Sulphur 6CH, *Staphylococcinum* 200CH, *Arnica montana* 6CH) were also prescribed using apple vinegar as a diluent instead of alcohol or sugar pearls.

Results

The patient left the doctor's office after the first appointment feeling an improvement with his first acupuncture session, having a reduction of pain, redness and swelling. After each session, the appearance of the leg and the symptoms were progressively improved until normalization of the leg at the area of the previous surgery, without edema, pain, hyperemia and no discharge of purulent secretion, after two weeks of treatment.

He continued to keep the acupuncture sessions to consolidate and maintain the improvement while also maintaining the recommended eating habits. Therefore, the second surgery, for removal of the nail, was not necessary. Sometimes, he missed the acupuncture sessions, because of the excess of his work, and eventually he went back with the same symptoms of pain, edema and hyperemia, always because of the abuse of food, such as beer or dairy products. These situations were controlled with auricular acupuncture

associated with apex ear bloodletting and new recommendation regarding diet and the absence of any type of antibiotic.

Discussion

Western Medicine Perspective

According to the Western perspective, the examination, diagnosis and treatment of Cellulitis is focused on the area of concern. As previously explained in one of my other articles, entitled “Why do Patients Still Catch Hospital Infections Despite the Practice of Infection Prevention and Control Programs?”, this perspective is based on Galen’s medical theories, which consider the body of the patient as composed by independent parts, with no relation or conception of the whole.

Non-purulent cellulitis is associated with four cardinal signs of infection: pain, swelling, redness and warmth. The diagnostic studies are usually not necessary, as the infection can be easily visualized and has specific characteristics. In the case of community cellulitis, the treatment is usually effective with a range of common antibiotics; however, there is a difference between the nosocomial cellulitis and the community cellulitis, according to Western Medicine perspective.

Community Cellulitis x Nosocomial Cellulitis

A community infection is any infection contracted outside the hospital, or an infection presented by the patient at the moment of his admission to hospital. Community-acquired infections can be distinguished from nosocomial infections by the types of organisms that affect the patients. They are usually related to other types of bacteria and are easier to treat [2].

A nosocomial infection can be defined as an infection caught while hospitalized. A nosocomial infection is defined as an infection not presented by patient before hospital admittance, but which appears at least 48 hours later [2].

As the use of antibiotics is extremely common inside the hospitals, the bacteria present there are more resistant to antibiotics, making treatment more serious and difficult [2].

Therefore, nosocomial cellulitis will often be related to stronger bacteria, with harder treatment [2].

Traditional Chinese Medicine Perspective

According to Traditional Chinese Medicine (TCM), infections between the muscle and the skin are associated with obstruction of Qi and Blood, related to the internal accumulation of external Dampness, Heat or Fire inside the body. In Traditional Chinese Medicine perspective, diet has major importance in the Patient’s health [3].

This image of the tree (Figure 1) is a metaphor of Western Medicine and Traditional Chinese Medicine. As already shown in the article “Why do Patients Still Catch Hospital Infections Despite the Practice of Infection Prevention and Control Programs?”, the metaphor of the tree is based on the idea that Western Medicine treats the patient in the areas represented by the leaves, corresponding to the symptoms of each specialty. Traditional Chinese Medicine, however, sees the patient as a whole, represented by the whole tree, the roots, the branches and the leaves at the same time. The part of the tree that is below the earth, the roots, are invisible to the naked eye, and therefore, are not understood by Western Medicine nowadays. The Five Elements Theory and the Yin and

Figure 1: Schematic drawing of the views of Western Medicine and Traditional Chinese Medicine.

Yang are represented by the roots. The idea is that the Traditional Chinese Medicine practitioner will be able to see the patient as a whole, understanding how external factors, such as dampness, heat, cold, dryness and wind can influence on disease, as well as diet and emotional issues [4].

Understanding the root of the problem, Traditional Chinese Medicine will be able to treat different diseases with the same method, as the problems, many times, are related to the same root [4].

The treatment for cellulitis based on the use of antibiotics, is positioned on the leaf of the tree. What possibly generated the clinical condition of hyperemia, edema and purulent discharge, was the ingestion of a large quantity of anti-inflammatories during his hospitalization, in addition to a diet rich in dairy products, cold water and raw foods. In the perspective of Traditional Chinese Medicine, the continuous use of anti-inflammatory drugs had generated an energy imbalance, mainly in the meridian of the Liver and Gallbladder, with formation of internal Heat and consequently manifesting itself with hyperemia and heat in the location of the incision. Secondly, according to Arndt-Schultz's Law (Figure 4), the use of drugs in high concentrations causes a drop in vital energy and according to Traditional Chinese Medicine, can contribute to the formation of internal Heat and lead to the hyperemia and heat in the affected area [4].

Galen

To understand better from where this difference on the medical perspectives come from, it is important to realize that the main base of the Western Medicine is due to a Greek physician, Galen, who wrote theories presenting the model of the functioning of the human body as being divided into self-sufficient parts. For example, the heart is self-sufficient and when the patient has a problem in the heart, the physician will treat only the heart. From his perspective, as the parts of the body are self-sufficient, the treatment should be based on reestablishing the well-functioning of the damaged part, therefore repairing health, according to his perspective [4].

Hippocrates

The Galen perspective can create difficulties on seeing the patient as a whole. According to Hippocrates, the father of Western Medicine, who lived 500 years before Galen, the body functions as a unity with interdependent functioning and works harmoniously to create the well-being of the patient. According to him, the body must always be seen as a whole, with interdependent function of the organs and the diseases are supposed to be comprehended as a natural process [4].

The importance of the physician would be not in curing the damaged part of the body, but increasing the natural resistance of the body, helping this own resistance to overcome the imbalance and restore its harmony. In order to achieve that goal, diet is a major factor [4].

Yin and Yang

In Traditional Chinese Medicine, Yin and Yang are the two fundamental concepts, and the main bases for all diagnosis and treatments. The idea of Yin and Yang is based on the perspective of balance. Everything can be reduced to Yin and Yang, and they are complementary opposite forces [4].

In order to be healthy, a state of equilibrium between the two energies should be the aim. They are constantly transforming to their opposite form, and constantly changing, therefore, an imbalance in one of them, will create imbalance in the other [4].

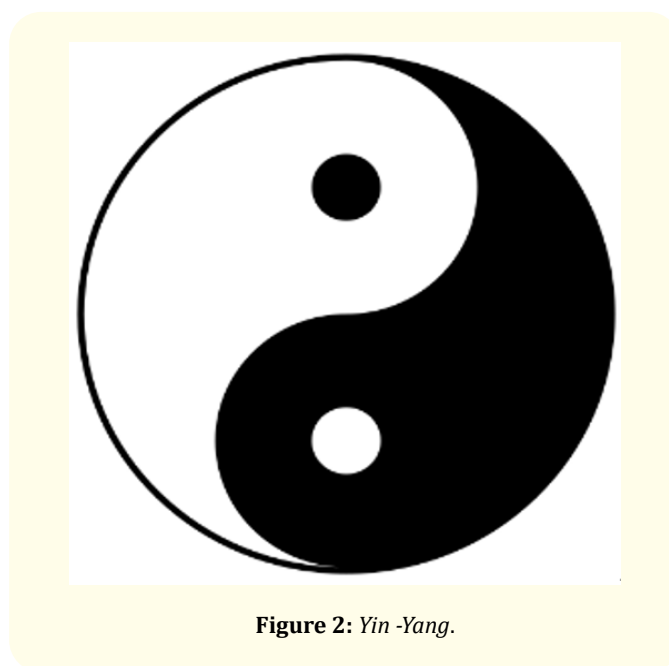


Figure 2: Yin -Yang.

Relationship between Qi, Blood, Yin and Yang

As already presented by the author in 2015 at the Acupuncture Research Conference at Harvard Medical School, in Boston, USA, this study is based on the hypothesis of all the functioning of the body being ruled by the flow of energy of Yin, Yang, Qi and Blood (Figure 3) [4].

Treating these energy imbalances, the patient will receive a treatment for all the symptoms at the same time, being able to be treated at the root of the problem. Understanding what caused the disease, we will be able to treat not only the symptoms, but the root of the problem [4].

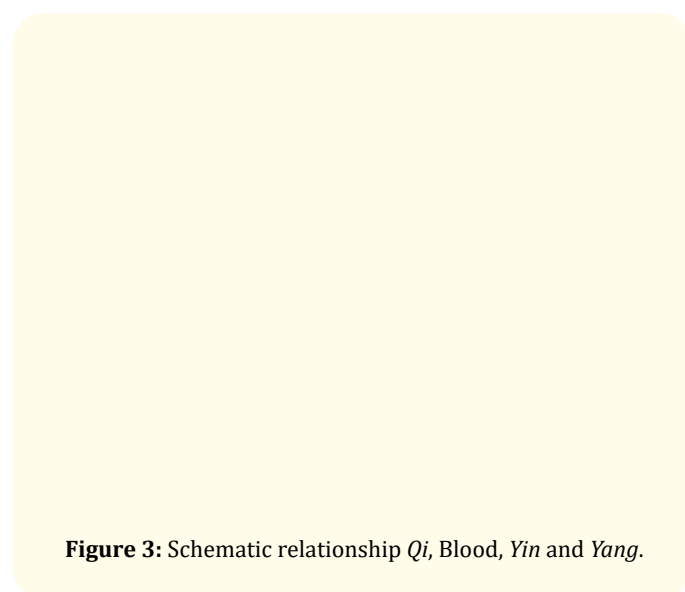


Figure 3: Schematic relationship Qi, Blood, Yin and Yang.

Chinese Nutrition

In order to survive, humans need to nourish from food. Therefore, the kind of diet determines the health [5].

In Chinese culture and Chinese medicine, food is seen as therapy and medicine. What is eaten has the objective of balancing the body and Yin and Yang, as well as influencing well-being. Traditional Chinese Medicine divides food into four categories: neutral, heating, warm and cooling. Every person has a tendency toward one of them, and the diet is responsible to balance this tendency, avoiding excesses or lack of one or more of the four categories. If, for example, the patient has a tendency of being cold, he should eat warm food, as in cooked grains and chilies [5].

In the case of cellulitis, the disease is associated with Heat retention. Therefore, the patient should avoid all food that can overheat the body, such as eggs, chocolate, alcoholic beverages, dairy products, especially when cheese is melted, fried foods, honey, coconut or pepper [5].

Considering the hospital environment, the inadequate feeding offered in the hospital (cold water, cow's milk, raw foods, fruits and salads) contributed to the case report patient's formation of purulent secretion at the spot of the incision because this type of diet leads to a deficiency of the Spleen-Pancreas energy [5].

Spleen-Pancreas energy deficiency causes a tendency to retain fluid in the body and malabsorption of nutrients, as well as causing blood to drain into the blood vessels. Consequently, this increases the formation of secretions and catarrhs in all cavities and in all incisions, and the yellowish color is the formation of internal Heat [5].

Water

Regarding water temperature, there is a huge difference between drinking warm water instead of drinking it at room temperature or cold. The energy of water is cold, drinking constantly cold water, as is the usual habit, in Brazilian and Western cultures, weakens the energy of the Spleen and Pancreas. This energy is responsible for the absorption of nutrients, as well as maintaining the blood in the vessels; this weakening process could lead to Blood deficiency, which is anemia in Western diagnosis. Many hospitalized patients suffer from Spleen-Pancreas disease, due to the fact they all drink cold water in Western hospitals.

Therefore, warm water is better, based on the idea of not inducing the disharmony on the Spleen-Pancreas, reducing the possibility of secretion formation and better absorbing the nutrients and consequently not causing anemia, reducing the risk of formation of internal Heat, which can lead to, in this case, nosocomial cellulitis [4].

Energy imbalance on admission

Hospitalized patients can be divided in two groups. The chronically ill and those who seem apparently healthy. The patient in the case report is probably in the second group. Due to his wrong diet habits (drinking beer, eating melted cheese, drinking cold water, eating dairy products, eating chocolate, etc.) and life style, before the accident, he was probably already suffering from an energy imbalance with Heat retention [4].

When this patient underwent the chronic ingestion of anti-inflammatory drugs in high concentrations, this cause more internal Heat formation than the previously existing one, contributing to trigger the infection symptoms that characterized a hospital infection in the current usual language. However, according to this new perspective, this supposedly infectious condition, which he presented, was only an energy reaction of his body responding to the constant aggression he suffered with medications, inadequate diet and so on.

Therefore, unlike the reasoning that exists today about hospital infection, relating its cause to bacteria, often, multi-resistant, this new way of thinking, may bring a new definition of hospital infection, not necessarily being caused by bacteria. It can be can only a reaction of the body when subjected to various types of medication, dietary aggression and the environment (ventilator, air conditioning, etc.). According to Hippocrates, the environment has a major importance on the well- being [4].

Acupuncture

Acupuncture has been an important part of Traditional Chinese Medicine and Chinese health culture for more than 2,500 years. According to TCM, there are energy flow patterns, named Qi, essential for health. Diseases are associated with perturbances in the flow of the Qi energy. The goal of acupuncture is to restore the balance, correcting the perturbations on the flow, using points close to the skin [4].

Auricular Acupuncture

Auricular acupuncture has the goal of diagnosing and treating any medical condition in different areas of the body using acupuncture points on the external ear surface.

According to the neuroscientist Wilder Penfield, there is a map of the body in the surface on the brain, being projected to different areas of the body, creating microsystems on many parts of it. The ear is one of them [6].

Auricular acupuncture was developed in Western Europe in the 1950's, and grew in the following decades in Germany and in the rest of the world. It is based on the stimulation of the acupuncture points above mentioned, on the external ear surface [6].

The ear map has the form of an inverted fetus, representing the anatomical and emotional body. Auricular acupuncture uses this representations and this microsystem to treat a wide range of diseases [6].

Apex Ear Bloodletting

The Apex Ear Bloodletting is based on the medicine proposed by Hippocrates, and on the Theory of the Four Humors, also proposed by him. This theory associates the four basic elements (Air, Fire, Earth and Water) with the four basic humors of the body: blood, black bile, yellow bile and phlegm [6].

The practice of bloodletting started 3000 years ago, in Egypt. It was continued in many parts of the world and spread to Europe in the Middle Ages, matching its peak in the 19th century and afterwards, used in few traditions [6].

The practice is done on the ear apex, and it treats different conditions. According to TCM, the procedure discharges the Heat from the body, relaxing tension and relieving pain [6].

The Arndt- Schultz's Law

The Arndt-Schultz's Law (Figure 4) was originally formulated in 1888, and it helps to understand the effects of different drug concentrations on an individual. The rule is that small doses stimulate, moderate doses inhibit and overdoses kill. According to this law, highly diluted drugs would improve organic processes, while high concentrations would harm the metabolism and the vital energy. This hypothesis curiously coincides with homeopathic theory. Currently, Maturana and Varela, two Chilean researchers, have proved this and much more regarding the sizes of doses in the role of stimulating or inhibiting the vitalities of living beings [4].

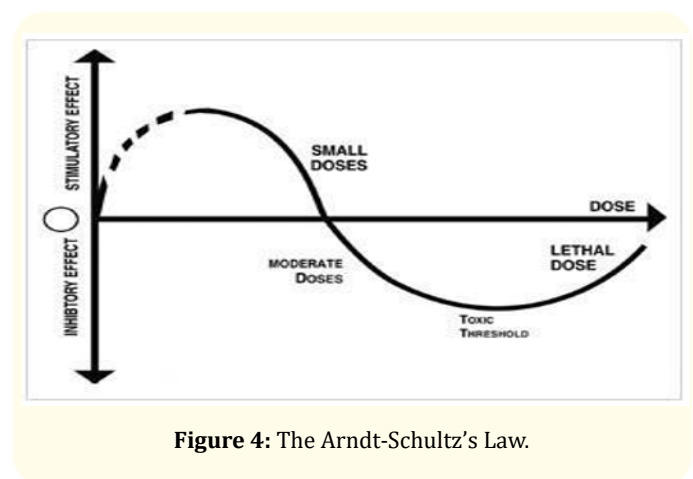


Figure 4: The Arndt-Schultz's Law.

Homeopathy

Samuel Hahnemann, a hundred years before the Arndt-Schultz's Law, was the founder of Homeopathy, whose theories correspond to the law proposed by Arndt-Schultz. Hahnemann was responsible for the main principles of Homeopathy science. He was the first physician to prepare medicines in a specialized way [1].

Nowadays, homeopathy is a holistic medicine, which uses highly diluted substances, mainly in tablet form, specially prepared, with the goal of triggering the body's own healing mechanisms. A homeopath will prescribe medicines specialized to each patient's set of symptoms and how they experience them, taking into account their level of health. Homeopathy is based on the principle of "like treats like" - that is, a substance that can cause symptoms when taken in large doses can be used in small amounts to treat similar symptoms. In Brazil, homeopathy has been considered a medical specialty by the Federal Medical Council since 1980 [4].

Constitutional Homeopathy of the Five Elements

The theory, "Constitutional Homeopathy of the Five Elements based on Traditional Chinese Medicine" (Figure 5), is being elaborated by me and it was already presented at the World Congress of Homeopathy (LMHI) in Buenos Aires, Argentina, in August 2016

Constitutional Homeopathy of the Five Elements and at the European Congress of Homeopathy in November 2016 in Vienna, Austria [4].

In the case of the patient in question, homeopathy was given (Sulfur 6 CH), to remove excess fire and redness from the site. This theory was not used, which is the Constitutional Homeopathy of the Five Elements because at the time the patient was treated, this new theory had not yet been developed by me and therefore, the patient was treated in a symptomatic way.

The explanation below refers to the different ways of reasoning against an infectious process, and the cause may be of several elements.

In the case of the nosocomial cellulitis, the patient presented an infection, marked by fever/high temperature, redness, and inflammation. These symptoms have similarities to the dynamics of fire, heat, redness and movement in the increased blood flow in the form of inflammation. The treatment strategy would be to use acupuncture points or homeopathy medication that allows a Water response dynamic within the body to control the infection, or Earth response dynamic to drain the energy away from the infection, or Earth response dynamic to drain the energy away from the infection. Wood dynamic treatments would not be used as they would feed the fire and worsen the condition. An infection with

Figure 5: Homeopathic remedies that can represent each element in the Five Elements.

For the production of homeopathic medicines, vehicles such as alcohol or lactose sugar are usually employed. In the patient in question, we changed the vehicle used because it itself could be an aggravating factor in consideration of the energy imbalance already presented by the patient. According to TCM, the use of alcohol may contribute to imbalance the Liver meridian, leading to the formation of internal Heat. The use of sugar can generate energy deficiency of the Spleen-pancreas, leading to fluid retention and secretion formation in the wounds, in this specific case, the output of secretion in the surgical wound. Therefore, these two vehicles were avoided to ensure energy balance and not aggravate the infectious process installed, involving this case with an infectious process related to a multi-resistant type of bacteria.

In this case, all allopathic medications such as antibiotics and anti-inflammatories had been removed, because, according to Traditional Chinese Medicine, these drugs cause internal Heat formation, mainly in the Gallbladder meridian, and in the previously published work "Can Hospital Osteomyelitis Be Treated without the Use of Antibiotics?" the pathophysiology was the same.

Furthermore, according to the Arndt-Schultz Law, the use of medication in high concentrations causes the reduction of vital energy, and also the formation of internal Heat according to the teachings of Traditional Chinese Medicine.

Therefore, this type of medicine was not utilized at all, and was promptly withdrawn. The medication used was homeopathic, which besides improving vital energy, did not induce the greater risk of internal Heat formation, reducing the risk of the aggravation of the possible infectious process installed in the surgical wound, as in the use of medications at high concentrations, such as anti-inflammatory and antibiotic drugs previously used [7-13].

Conclusion

The conclusion of this study confirms that we are able to treat post-surgical nosocomial cellulitis without the use of antibiotics. To achieve this goal, it is recommended to treat the patient by observing the energy imbalances of Yin, Yang, Qi, Blood and Heat Retention and, in this specific case, the patient's imbalances were treated through acupuncture, dietary counseling and homeopathy. As Hippocrates once said, "It is far more important to know what person the disease has than what disease the person has". An Einstein quote was also considered by the physician in the treatment's reasoning: "we cannot solve our problems with the same thinking we used when we created them".

Because in the case of this specific patient, the use of antibiotics and anti-inflammatories were the main cause of the problem, and according to this sentence from Einstein, treatment with variations of different types of antibiotics would only contribute to the worsening of the problem. We had to develop another kind of reasoning and approach to treat this patient and reach the success that was eventually and fortunately obtained."

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