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HISTORICAL ASPECTS OF THE DEVELOPMENT OF SURGICAL CARE FOR INJURIES

Providing adequate emergency care is the key to the success of further treatment. The most frequent type of damage at any time was the wound received by a person during his life.

Wound treatment is one of the oldest branches of surgery and has many centuries of experience. The art of healing wounds was of great value both in ancient times and in the present. Over the past centuries, medical literature has accumulated many ways of treating wounds. The absolute majority of them have lost relevance and have only historical interest. The accumulated knowledge about wounds and methods of their treatment is priceless, because the wounds that a person received while hunting, in everyday life, during inevitable battles, have always accompanied him from the first steps of existence to our time.

The study of ancient papyri showed that there were attempts to treat wounds as early as 3000 BC, when the Egyptians used honey, oil and wine for this purpose. From the Babylonian codex of King Hammurabi (Navudochonosor), which dates back to the 18th century BC, it became known about the existence of surgeons who accompanied the army to provide aid to the wounded during hostilities.

From the "Book of Life", published in 500 BC, it became known about the significant achievements of ancient India in the treatment of wounds. Surgeons in those days tried to treat wounds, remove foreign bodies from it and sew tightly. In addition, they treated fractures, performed limb amputations, performed skull trepanation, and laid the foundations of plastic surgery.

Starting from 500 BC, the most complete manuscripts about the achievements of doctors of that time have been preserved, on the basis of which it is believed that the science of healing wounds begins with Hippocrates (460-377 BC). He was the first to formulate the concept of primary wound healing - without suppuration and secondary - with suppuration.

The skill of doctors of the past was always respected. Society highly valued such doctors and their work. The famous Homer in his work "Illiad" wrote that: "Many warriors are worth one skilled physician".

A significant contribution to the development of wound treatment was made by Claudius Galen (Yalenus Claudius) - philosopher, naturalist, classic of ancient medicine, the most outstanding physician-scientist of imperial Rome, Greek by nationality, encyclopedist, whose works enjoyed unparalleled authority in the history of medicine among all subsequent generations of doctors for 13 centuries, up to the Renaissance.

Galen was born in the city of Pergamum (Asia Minor), he was the son of the famous architect Nikon, a highly educated person not only in his field. Galen was preparing to work as a philosopher, but for a random reason (one of his dreams was misinterpreted) he became a physician, although he maintained an interest in philosophy all his life. He received a good philosophical education in his homeland in Pergamum. He studied Greek and Roman philosophy, part of the four most important schools of that time: Stoic, Platonic, Peripatetic and Epicurean. Its leaders were the philosophers Eudemus and Alexander Damascene. None of the schools took advantage of him. Perhaps because young Galen's teachers were representatives of different philosophical schools, he did not become a follower of any of them. Nevertheless, he preferred the teachings of the Peripatetics and called Aristotle his great teacher. Only after studying philosophy, Galen at the age of 17 began to study medicine. He travels a lot and continues his studies in Smyrna, Corinth, Alexandria - the center of medical science at that time.

On his return to Pergamum, Galen became a physician to the gladiators for six years. Practice at the school of gladiators enriched his knowledge: he could see various injuries, observe the sick and wounded, follow the course of various diseases. Later he arrived in Rome and continued his medical work. Galen was not only a brave experimenter, but also a brave and experienced surgeon. Claudius Galen (2nd century AD) in ancient Rome used wound suturing and bronze drainage tubes to treat gladiator wounds. In his opinion, suppuration should be a prerequisite for wound healing. Unfortunately, this provision had a significant negative impact on the education of doctors in Western Europe. However, future doctors of Europe for almost 8 centuries learned from his writings.

With the decline of the Roman Empire and the rule of the Inquisition in Europe, the center of scientific thought moved to Byzantium and the Arab countries, where the high level of surgery at that time was preserved.

Abu Ali Ibn Sina (Avicenna, 980-1037) composed the great philosophical and theoretical work "Canons of Medicine", which was soon translated into Latin and was a table book of medical students and doctors for more than 5 centuries. In his book, he clearly defined the approaches to the treatment of various wounds. Avicenna wrote that there are different ways to treat each type of wound. In general, at the beginning of treatment, it is necessary to stop bleeding, if there is any.

If the cut of the wound is simple, continuous, then for treatment it is enough to pull and bandage the wound, not allowing it to touch any oily or wet environment, and not allowing dirt to enter the wound. If the wound is large, spreading and its edges do not converge, then it is treated with suturing. In the following, in order to prevent the accumulation of moisture in it, drying, gluing with various substances are used during the treatment. If there is not enough tissue in the wound, then such a wound cannot be bandaged. It should be kept clean and use means that will contribute to the growth of insufficient tissues.

A wound prone to the formation of pus must be given the correct position so that fluid and pus can flow freely from the wound cavity. For this, the wound should be positioned so that its edge is always lower than its bottom. To achieve this goal, injured limbs or other parts of the body are immobilized or placed in an inclined position. If it is impossible to do this, then a special incision must be made for the exit of pus and liquid.

If the wound is at the end of a nerve or muscle, then it is accompanied by dangerous symptoms: the victim's face turns pale, the pulse drops after tachycardia, which can cause fainting and loss of consciousness.

However, the gradual development of surgery continued in Europe. In 1177, Roger of Salerno proposed to close the edges of the wound with silk ligatures after removing foreign bodies.

Bishop Theodoric (1205-1296), also a surgeon, categorically denied cauterizing wounds. Mykola Florentiyskyi (1350) after initially cutting out the edges of the wound, sutured it.

In 1517, Giovanni Vigo from Rapallo (1460-1520) wrote a textbook on surgery, where he suggested cauterizing gunshot wounds (hot iron, boiling oil). Bartolomeo Maggi taught that gunshot wounds are, in their essence, simple uninfected wounds (1544).

Ambroise Pare (the founder of military field surgery) after one of the battles (1536), when he did not have enough oil for all the wounded, instead of boiling oil, he used a mixture of egg yolk, turpentine and rose oil. The wounded felt well (they did not die from poisoning). He denied the toxicity of the wounds and the burn during the stabbing. In 1552, he introduced ligation of large vessels instead of hemostatic agents and red-hot iron.

The year 1731, when a surgical academy was founded in Paris, which in 1742 was compared in terms of rights to a medical faculty, is of great importance in the development of surgery in general and the problem of wound treatment. From that time, surgeons were compared in rights with doctors who received a university education.

Provisions on the treatment of wounds were consistently improved. In order to prevent suppuration of wounds, the military surgeon I. Bilger (1720-1796) proposed to widely dissect the wounds and insert tampons soaked in ammonia and camphor alcohol into them.

The chief surgeon of Napoleon I, Jean-Dominique Larray, organized surgical assistance in the military battle line in mobile dressing units (ambulances), which were first tested in 1793.

Russian surgeon A. Churakovsky in his monograph "Military Medicine" (1836) proposed the necessity of mandatory excision of dead tissues, removal of foreign bodies and blood clots, turning a closed wound into a cut one, and applying sutures.

M. Pirogov (1810-1881) was the first to use anesthesia and a plaster cast in the field. He gave a classic description of the clinic of traumatic shock, concussion, gas edema of tissues, wound "chahotka" (wound exhaustion), developed original methods of surgical treatment of bone-plastic operations.

The Crimean War - M.I. Pirogov "Sevastopol stories". Bullet and shrapnel injuries. Doctors in dirty uniforms of the second term probed all the wounds and made sure to remove the bullet. The results were terrible: almost all wounded with damage to large bones died of infection. Therefore, primary limb amputations were performed. But they didn't help either. "It doesn't matter - that's right, that's different." Pirogov was in despair.

Russo-Turkish campaign, 1878. Bullet wounds predominated. The "do not touch" tactic is a reaction to Crimea. It was better that way. But there were already Pasteur and Lister, antiseptics and civil surgery were already gaining hope for better results.

E. Bergman (1836-1907) - a follower of M.I. Pirogov Developed the principles of military field surgery based on asepsis. With his students, he created model military field hospitals and dressing stations directly close to the front line. Widely used aseptic and plaster bandages.

The role of aseptic surgery in saving the lives of the wounded, reducing and curing mutilations, and reducing suffering is evidenced by some statistical data: During the Crimean War, up to 40% of the wounded died in hospitals; in Austro-German in 1866 - 18%, in Franco-German - up to 11%; in Spanish-American - 6%, Bursian - 5%, Russian-Japanese - 3% from the Russian side.

"On the hills of Manchuria" (Russian-Japanese war of 1903-1905). Shame on Russia. In his own records, Boris Dmytrovych Veresaev, as a witness, noted that there was almost no surgery. Only forced operations - wounding blood vessels, severing limbs. However, asepsis already existed. But there was no system - evacuation under any conditions. All in a row and together. "Drainage".

In 1898, the German surgeon P.L Friedrich in experiments on animals, established the scientific principles of primary surgical treatment of wounds. He proved that microorganisms in a wound contaminated with earth begin to penetrate deep into the tissues after 6-8 hours.

However, only during the First World War, Caudier (1916) and Lemmatize (1916) mentioned the experiment of P.L. Friedrich and developed the primary surgical treatment of the wound with the application of the primary suture and implemented it in the treatment of the wounded.

World War I 1914-1918. The flawed system in most armies of the world failed to clearly organize surgical assistance. Almost as before - evacuation above all else, at advanced points - only pus: phlegmons, arthritis, pleurisy... There is no need to talk about abdominal injuries - as before, only the lucky ones survived.

However, not everyone suffered because of these troubles. This was especially not the case with the French army. They started the same way: "Do not touch." Quickly made sure - a disaster! A large number of shrapnel wounds, soil contamination - gas gangrene began. But there were already works by Friedrich on the surgical sterilization of wounds by excision, like tumors. And in the West, they were the first to reorient themselves in the provision of surgical assistance to the wounded - they introduced "prophylactic surgery." Cut wounds in the first six hours after injury. Operate on the forward points of all wounded, even with any minor injury! Excision of wounds. Laparotomy. Operations on the skull. And positive results were achieved.

Surgical care - preventive surgery. The most important thing is to remove the food for microbes: crushed by a fragment or a ball of tissue. Healthy cells are not afraid of microbes, with the exception of particularly "dangerous" ones. Which include the causative agents of gas phlegmon or gangrene, that is, anaerobes.

Modern combat trauma is significantly different from the above-mentioned injuries to the human body. Stabbed, chopped, crushed and gunshot wounds of the past are opposed by mines and explosives, combined injuries are complicated by combined injuries of many systems and organs (polytrauma) and several factors (mechanical, chemical, radiological, bacteriological, etc.). It needs new approaches to providing adequate, effective and timely emergency care. The basis of which is modern achievements of medical science.

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