

Chapter 361

Thousands of lights, although there was an explosion in stone city, the fire was put out by firefighters, although thick smoke billowed. But ordinary people have nothing to worry about, because they know that there are fire brigades, police and troops. Don't worry! They continue to live peacefully in the past and plan their future life.

In the building of tea vegetable municipal government, relevant leaders urgently held a meeting on the explosion.

"We must go all out, no matter how, we can't let the hero bleed and make the family members cry. Let our hospital send someone to leave overnight. " A leader sitting in the middle patted his head on the table and said.

"Our hospital already has a medical team in stone city. The patient is in critical condition and has not been through the danger yet. " A leader in charge of medical treatment explained the relevant situation.

"Then continue to send people, bring the necessary equipment and drugs, and let the municipal hospital send the most cutting-edge doctors."

"Yes!"

The big office of the municipal hospital, "that's the situation. There is a wounded man in stone city, more than 700 kilometers away. Although we have a medical team, it's not enough. "

Ouyang looked at the directors, deputy high school officials and attending doctors of the following departments, and then said, "now, I order the establishment of a rescue expert group. I am the team leader. All departments, regardless of the director of internal surgery, will automatically become a team member. Now I'll give you five minutes to explain to your family, and then go. Comrades, it's urgent! There is no reason! "

In the dark night sky, the medical group of chasu city set out. Three ambulances and armed police vehicles set out quietly and ran to stone city.

In the bird market, the army, the police and the government meet“ The city of tea is seven hundred thirty three kilometers away from Stone City. They have sent a medical expert group, which is almost the essence of the tea city hospital. Fortunately, there is also a medical team from the tea vegetable city hospital in stone city, and they have now carried out rescue. "

"It is estimated that there are still difficulties. After all, they are grass-roots hospitals." One of the

leaders frowned and said.

"Experts from the burn department of the army general hospital have been prepared. Please give orders."

"Take a helicopter and take the necessary medicine. Hope ~~, set up an inspection team and set out after dawn. Don't inform any local unit to find out the situation. Whoever is responsible will not be tolerated. We must give an account to the people and our heroes. "

"Yes!"

"Let's inform the family members. Please go and invite the family members to stone city. Send one to our hero. "

Stone city hospital, time passed minute by minute, and the figure in the emergency department shook. Hundreds of blood teams silently looked at the doctors in the emergency department.

The bloody firefighters quietly looked at the emergency department, silently saluted with tears, and then left.

Four brothers who lived and ate with them died and one was seriously injured. There was no time for them to cry. There was still a lot of work waiting for them. This is responsibility.

"Does the ICU have a separate isolation ward?" Zhang Fan looked at the wounded and asked.

"Yes!" The director of the emergency department said.

"Inform your leaders and transfer. Transfer the wounded to ICU. Do isolation treatment. "

"OK."

Zhang Fan has done what he should do. Now it's up to God to give this opportunity. Now the wounded are like a dam. The flood has reached the dam crest. A little carelessness is the disaster of destruction. It can be said that the doctors have nothing to do.

"Doctor Zhang, here is the doctor's order. Have a look." The head nurse handed the sorted doctor's order and rescue records to Zhang Fan.

"Well, good." When a patient is transferred to another department, the medical records should be handed over and signed. Who signed? Of course, it's Zhang Fan. Who is responsible for the rescue, who signs, who implements and who signs.

Zhang Fan looked down at the medical record, wrote his name where he needed to sign, and then handed it to the head nurse.

Across the glass wall, Zhang Fan looked at the wounded covered with pipes and various testing instruments. His mind was blank. Waiting, waiting for God's judgment, he hated this situation, hated this uncertain situation.

"Prepare plasma and prepare for surgery. In case of uncontrollable infection, amputation may be necessary." Zhang Fan said to the president of stone city hospital.

"Isn't this going in a good direction?" The president of stone city was opened by what Zhang Fan said. After all, he was not a professional. He only knew that the patient seemed to be stable now.

In fact, the current situation is no more stable than that in the emergency department. In the emergency department, Zhang Fan cut the patient's eschar and opened the fascia, although the patient saved his life temporarily.

At that time, Zhang Fan was not anxious at all, only nervous. Now Zhang Fan is really anxious, because he has no way and no means to help the wounded. He can only rely on the wounded himself and God.

"Go and have a rest. I've been standing for hours. I'll help you." LV Shuyan appeared beside Zhang Fan. After the wounded were sent to the ICU, Zhang Fan stood in front of the glass wall and looked at the wounded inside.

"Nothing."

"No urine yet?" LV Shuyan sighed and asked.

"Yes!"

LV Shuyan accompanied Zhang Fan and quietly looked at the wounded in ICU. The liquid ticking input is already in the dead of night. Zhang Fan will wait, live or die, just this night.

The nurse has changed three times. Zhang Fan looked at the nursing record sheet.

Body temperature fluctuates little. Heart rate decreased slightly. The two-hour blood gas analysis and electrolyte report showed that the patient's internal environment was fairly good.

All the data show that Zhang Fan's treatment is effective, cutting the eschar and alleviating the external pressure. However, this time is not a happy time, because this time is also a time when bacteria are

preparing. Often, at this time, the patient has been pulled by the doctor to move towards the living side.

Because of the outbreak of bacteria, the patient was directly pulled into an endless abyss again. The wound often appears necrosis, growth stagnation, dryness, bleeding, and white blood cells rise and fall suddenly overnight.

"Dean, the superior came by helicopter." The fat vice president kept wiping the sweat on his head. He hasn't seen this before.

"Come on, let's go to meet you."

"How are the wounded?" A group of men in military uniforms got off the plane. Flying at night, they really fight.

"Now I have entered the ICU."

"I asked what was going on. How are your vital signs?" The soldier's words are straightforward without any implication.

"Well!" Dean Khan came down. He didn't know, and he didn't dare to talk nonsense.

"Who is the doctor in charge?" The crowd rushed to the ICU. One of the soldiers who seemed to be in charge asked.

"Me!" Zhang Fan turned his head and looked at the wounded in the ward.

"How's it going?" In a stern tone.

"Here is the medical record." Zhang Fan is not in the mood to talk to anyone. No matter who he is, he is not in the mood to talk now. The Dean stood by with an anxious face. He wanted to come forward and explain, but he didn't dare. I can only stand aside and worry secretly.

"I'm the director and chief physician of the burn department of the general hospital." After reading the medical records, the director's tone was much better. He was very worried on the way here. He was deeply afraid that the doctors below had no countermeasures. Time, at this time, is equal to the blood strip of the wounded.

Zhang Fan nodded and didn't speak "Handled well. Now we take over the patient. You can go down and have a rest! "

Zhang Fan turned and looked at the soldier. He said softly but firmly, "no! I'm his first doctor. He didn't give up, and I won't give up! "

"This is an order! ~"

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Zhang Fan's eyes turned red, but he couldn't say a word. As long as you are a doctor, you have to obey others' orders, because they are superior doctors and chief doctors. These are the rules, just like the army.

Cluttering, cluttering, came from the footsteps far and near“ no need. We are responsible for the patient to the end. " Here comes the slightly bent old lady.

Ouyang, with a tired face, followed by a group of experts from the tea vegetable City, set out all night and galloped all the way, that is, the armed police and 120 drivers dare to drive like this. Ordinary drivers have the courage and don't have the technology. They don't want to die when they soar at night!

"Dean!" Zhang Fan is almost crying. People with backstage are really happy.

"I'm the director of the burn department of the Army General Academy. The superior sent us to take over the patient. " Soldiers are usually straightforward, not to mention soldiers in higher-level hospitals.

"I didn't receive this order. All I know is that my superior asked me to set up a rescue team. Here, stone city, belongs to tea vegetable City, and we are the direct superior Hospital of stone city hospital. Besides, we are the patient's first doctor. " Zhang Fan has nothing to do with his superiors. The superior hospital is not at ease with the subordinate hospital. It is obvious, but Ouyang is different.

The old lady didn't even look at the director of the military region. What's the matter with the director? Don't I have a director? It's no use for the other party to come to the dean. She's not their subordinate.

In fact, this line of work is like this. There is great competition between military and civilian hospitals. Military hospitals do not bird local hospitals, and local hospitals do not bird military hospitals. In particular, the leaders of military hospitals rarely go to local hospitals, and the experts of local hospitals can't go to military hospitals at all.

"How, can you insist?" The old lady looked at Zhang Fan. Although her face was serious, her amiable eyes were really satisfied with Zhang Fan.

"Report to the Dean, you can insist."

"OK. Now there's a rescue meeting. Will you join? " Then he asked the director of the Army General

Academy. The old lady is so protective of her calf that she can't tolerate others to say her heart meat, not to mention the heart meat that has been boiled all night.

But this has to work. She will certainly not let go of these troops. However, she certainly won't let go of the initiative. A large group of people rushed all night and finally came to fight people. Ouyang must be unhappy.

In a word, it takes the initiative directly“ Participate. " There's no way, neither does the director. The old lady doesn't look like a good stubble. He's here to save people, not to fight for spirit. Let's talk about the meeting first. I'll see you at the meeting.

"Prepare the meeting room. Protect the custody here and bring the list of your hospital. Who are the director and head nurse of the ICU here? " Ouyang looked at the director of the Army General Academy and said to the president of stone city.

Ouyang directly looks down on this kind of factory and mine hospital, just as the general hospital looks down on the tea vegetable city hospital. But she is better than others because she has this qualification. In her hand, the tea vegetable city hospital has been in charge of the cow's ear in the tea vegetable city. This is strength.

"Good! OK! I'll prepare it now. " The president of stone city is big. Ouyang Hong knows too well that women in the medical system of tea vegetable city are angry when they disagree.

A group of logistics personnel from stone city hospital quickly prepared the office. The enterprise is rich, and the hospital is not poor. The interior decoration of the office is very high-grade. I don't know which conference room is the world's top 500.

"This!" After the venue was arranged, the president of shitoucheng hospital looked at the director of the provincial military region hospital and Ouyang. He didn't know what to say.

"Who is the attending doctor of the wounded and who will be the host to introduce the condition? No more nonsense. Time doesn't wait and the condition doesn't wait." Ouyang said expressionless.

"Good! Good! " The president of stone city hospital's teeth are almost broken“ Mother, if you are not as skilled as a man, you are not a man! "

Ouyang finished and looked at Zhang Fan. Zhang Fan understood that he walked quickly to the podium of the venue. He didn't have to open the medical records because he knew it well.

"At about 8 o'clock last night, due to the sudden disaster, Li Qiang, a fire officer and soldier of our armed

police, was accidentally burned while fighting the fire. After being rushed to stone city hospital, the patient developed shock symptoms. The injury was obvious, and the head, chest, back and both lower limbs were scalded in a large area. The burn area is about 45%, and most of them are deep third degree injuries. Local skin is obviously carbonized. At admission, the heart rate increased significantly, the blood pressure and pulse pressure narrowed significantly, and then decreased. Breathe shallow and fast. Lab return ~ ~ "

Zhang Fan quickly introduced one side of the disease. Want to be concise and very comprehensive. What the medical industry pays attention to is just like classical Chinese, which should be concise but rich in content. There are only a few words for a patient's main complaint, but it must cover the patient's condition, especially the elderly patients in internal medicine. How complex and complex the condition of the elderly patients in a lifetime, but the doctor has to consider it for a long time if he wants to be comprehensive.

"After admission, the patient underwent tracheotomy in the emergency department, cleaned the wound, cleaned the respiratory tract, and corrected the shock, but still could not significantly improve the patient's vital signs. During the anti shock period, the patient's respiration, blood pressure and heart rate did not change significantly. Considering the acute exudation stage of burn and large-area carbonization of surface tissue, there is leakage while conveying. Therefore, the patient was treated by decompression and incision, and the patient's condition was significantly improved. "

After introducing the condition, Zhang Fan quickly said the rescue process at that time. These things were like things printed in his mind and said them without stumbling at all. After that, Zhang Fan did not step down, because he knew that someone would ask questions.

Sure enough, one of the soldiers in the military hospital said, "is it necessary to cut it? Does the use of antibiotics take into account drug resistance? Why is it necessary to use anti anaerobic antibiotics, which is the surface of the body? "

Zhang Fan's treatment can be said to be very clear, that is, to save life, and there is no big problem, but this treatment, especially this very critical rescue, many and many treatment measures are not clearly specified, that is to say, the medical industry has not been unified. It is very controversial to use that instead of that.

In particular, anaerobic bacteria, as the name suggests, are bacteria that hate oxygen. Generally, there are not many such bacteria on the body surface, but one of Zhang Fan's three consecutive antibiotics is an anti anaerobic antibiotic, which was put forward by the doctors of the military hospital. In fact, this is not a fault, but a different idea.

However, if Zhang fan can't explain, this is the problem, this is the big problem. The director of the dermatology department of the tea vegetable city hospital also frowned. She didn't understand Zhang Fan's medication.

"It was necessary to cut. At that time, the wounded had formed a circular eschar, and the tightened

body had become a lot of pressure. It was originally an acute exudation period, and the shock could not be corrected." Zhang Fan made it clear.

This so-called question is actually very bullshit. There is no one during the rescue. After the rescue, it is a troublesome thing. Especially for the rescue of this special nature, someone will definitely question it.

Thousands of people and thousands of faces, not to mention that there is no clear and standardized rescue, and the industry is becoming more and more refined. Now, doctors are more and more afraid to do it. In a short period of more than ten minutes, or even a few minutes, if they don't want to make mistakes, they will keep practicing their liver and hands. Therefore, a rescue, especially a large-scale rescue, can almost become a highlight in a doctor's resume or file.

Who is more awesome than doctors of the same level? Just look at the profile. Whoever presides over more large-scale rescue will be a cow. It's not vague at all. Don't he dare to take over the large-scale critical rescue? afraid to!

The comprehensive quality of doctors is too high for rescue, which is why there is a chain of contempt in the hospital. Doctors outside God despise orthopedics, because many large-scale rescue, directors outside God dare to go, orthopedics may not dare, not because who makes more money and less money.

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"Burn infection is the main factor threatening the lives of patients at present. Three military region hospitals in China have given reference guidelines. 52% of scalded patients died of infection, and the Cincinnati burn center reported that 75% of large-area scalded patients died of infected wounded." Zhang Fan opened his mouth and came. These data came from the liver when he was transferred to the dermatology department.

Medicine is a science department. When you can't convince each other in surgery or treatment, you can only rely on data. If these data are not specially prepared, it is difficult for ordinary doctors to come if they want to open their mouth. These data are not used for treatment. This is the difference between doctors and scholars. Things in the world are so bullshit. It is really not easy to be a good doctor.

"This has little to do with the use of anti anaerobic antibiotics. I think the use of anti anaerobic bacteria in this three series of antibiotics is a waste. It not only occupies the channel, but also easy to cause drug resistance. " The doctor of the military hospital directly interrupted Zhang Fan's words.

The dispute over ideas seems very mild. In fact, the sword light and sword shadow can be fatal if you are careless. By grasping one point, you can directly overthrow all of you, and then push back the responsibility.

Human life matters, a little bit of small things can be magnified to the point that ordinary doctors can't bear, not to mention that the wounded is still a hero.

Ouyang thought it was wrong. She turned to see the doctor in her hospital. Her meaning was very clear. Help the field! She knows Zhang Fan. Surgery is very powerful, but internal medicine is general. Zhang Fan is about to collapse because of a cardiology department.

And she knows such things too well. A little carelessness is a matter of endless trouble. She is worried that Zhang Fan is too young and some things are not so simple.

A unit, especially a medical unit, if there is no special competition, it is actually very united. You help me, I help you, and walk cautiously and slowly in this special industry.

The director of the respiratory department, Juma Buick, was just about to speak. Zhang Fan nodded to him and motioned him to wait a moment. Then, Zhang Fan continued, "if there is rot, there must be bacteria! Although most burns are bacilli. However, after using spectrum antibiotics, the effect is still not obvious. Why? Because of the omission of anaerobic bacteria. "

"Are you justified in saying that? Do you have laboratory data? Where did this come from? It's healing, it's human life, not your mouth. " One of the army doctors is starting to get a little on the agenda.

In fact, this matter, how to say, China's burn department has taken too many detours. Compared with other departments, this discipline is really not easy.

The European and American blockades in the early years, especially those related to war, really did nothing for the tightness of China's blockade. In that year, a large number of soldiers were burned in a war in the south of China.

The whole medical system, especially the military medical system, is one after another. It can be said that there is no need to find ways.

For example, comprehensive debridement. After the wounded were admitted to the hospital, several surgeons were gathered to comprehensively debridement the patient. The result was still not good, and

the infection was still the same.

Then there is aseptic isolation, which is quite strict. The medical staff entering the ward should take a bath, wear isolation clothes, have bacteriostatic gum in their mouth, and the pen and paper entering the ward are strictly disinfected, so the infection can continue.

These are human lives! The lives of countless soldiers.

"Ha ha!" Zhang Fan smiled expressionless. Does he really want to say it's necessary? Is this necessary?

"First of all, there are all kinds of germs in the human body itself. Originally non pathogenic bacteria have become pathogenic bacteria under this large-area trauma. The reason why we can't achieve the expected results after using a large number of broad-spectrum antibiotics is because of anaerobic bacteria. After the U.S. war in Afghanistan, their telplitz Research Center clearly pointed out that the first time for burns to be antibacterial, antibiotics must first be anti anaerobic. "

Zhang Fan directly threw out the results in the system. Infection is a very big subject in the surgical system. When Zhang Fan was on the basis of liver surgery, he didn't know how many times he saw it. Zhang Fan's step-by-step promotion is really not in vain.

"This, but there is a great debate at present. I think it is debatable to occupy such a valuable liquid channel." The tone of the military doctor who raised the question immediately dropped several grades. There was no way. The other party was too liver friendly. He could read such a small number of journals. He had nothing to say.

This kind of journal is also for the doctors of the military scald department. Because there is also a first aid for the battlefield in the medical industry, and the telplitz center is only a small center for the study of battlefield scald in the U.S. Army. He has also read it, so he can't speak.

The director of the burn department of the general hospital was also surprised. There are not many doctors who can read this journal in their hospital. After all, the war seems to be far away.

The doctors in tea vegetable city have hardly heard of this center, but this does not prevent them from being proud! Ouyang's frown slowly opened, and the corners of his mouth began to tilt slightly, proud! Zhang Fan didn't humiliate her and didn't waste her acting for him.

"It seems that Dr. Zhang has a plan! What's next. Can you make sure the patient goes through the bacterial outbreak? " The director of the scald Department of the general hospital made a speech and pointed to the key points.

Zhang Fan is tongue tied and can't say it. Treatment, especially this antibacterial treatment, has too many unexpected factors. Even if the probability is 99%, it can not be guaranteed to be safe. Moreover, this treatment can not reach such a high proportion at present.

"Even without anti anaerobic treatment, can you ensure that patients can safely get through this dangerous period? Is the spectrum of non anaerobic antibiotics correct? " Before the other party's voice fell, Ouyang said it directly.

"However, this is the treatment plan in our army."

"Nothing is necessarily right! Can you ensure that the wounded can safely survive the dangerous outbreak? "

This becomes an inconclusive debate. Is it meaningful or meaningless? I don't know, but what Zhang fan can be sure is that no one can convince anyone.

"Well, let's not discuss this problem first. What should we do now?" The director of the general hospital blushed with anger.

"Hum!" Ouyang didn't know how much he experienced when he was young. The director of the general hospital was her opponent.

"I understand the doctor's mood when the patient is lying in the hospital bed, but now is not the time to discuss this matter. Now, I command. " Ouyang beat the rake. The old lady is really strong, her brain is alive, her language is sharp, and ordinary people are not rivals. After she took the initiative, she began to order directly, and didn't give you a chance to breathe at all.

As soon as this was said, all the doctors of the tea vegetable city hospital stood up and listened attentively. No matter how angry the doctors of the general hospital were, they had to implement it. There was no way. It was not that the national army did not work hard, but that the other party was too cunning.

"I am the team leader, the director of the scald Department of the general hospital and the president of shitoucheng hospital are the deputy team leaders. I am fully responsible for the condition of the wounded, coordinate up and down and report in time.

The director of the dermatology department of chasu city and the deputy high of the scald Department of the general hospital led the vice president of stone city, the director of ICU and the head nurse as the first group to fully monitor the patients' skin and their life conditions, 24 hours.

The director of the respiratory department, the director of endocardiology and the doctors of the General Hospital of chasu city are the backup group to timely and accurately integrate the patient's condition, estimate the patient's condition, adjust the treatment at any time and be on standby for 24 hours.

Zhang Fan led other personnel to prepare for all operations for the second group and was on standby for 24 hours. "

After that, Ouyang looked at everyone here and continued, "now, put aside the dispute and go all out. As the leader with the highest position at present, I will give you a preventive shot first. If anyone doesn't care and shirks responsibility during the rescue, no matter which system you are, I will never give up.

The hero lying in bed has paid such a high price. As doctors, the last and only hope doctors, we must not let him chill. Go to work! "

In white coats, they put on the white coats of stone city hospital and entered their respective posts.

"Heart rate, pulse and blood pressure shall be recorded once every ten minutes. Apply hormones and increase the amount of colloidal rehydration. " With the help of the local government, the families of firefighters thousands of miles away set out.

Silent tears spread across the thousands of miles.

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"Pee! Pee! " The head nurse of ICU ran out with a cry. In the special isolation ward, there is only one doctor on duty and two nurses. Other doctors and nurses were watching through glass in the outer room.

Zhang Fan got up after sleeping for a while in the ICU doctor's rest room. He couldn't sleep because of something in his heart. After washing his face, as soon as he came out of the door of the duty room, he heard the head nurse of ICU crying with a festive voice.

In a hurry, Zhang Fan ran outside the ICU. Urination means that the body began to recover, and the circulating solution, that is, the blood, began to enter other relatively unimportant organs, such as the kidney.

"Come on, monitor your temperature." Zhang Fan hurriedly said that he couldn't take it lightly at this time. Really, sometimes the treatment is actually suffering people, patients and doctors.

"Dr. Zhang, 37.5 °." After a while, the ICU nurse reported the results.

"No, it's time for debridement. Now is the time when the body is thriving. " Zhang Fan told the expert treatment group.

"Do you want to observe again? The temperature doesn't rise very much. Now, if debridement, will a lot of bleeding lead to repeated disease. This is my personal opinion. " A doctor in the military region frowned and said.

Really, this trade-off is too bullshit. Without debridement, the patient's difficult situation will be swallowed up by bacteria. Debridement, such a large area of injury, there will be no small amount of bleeding. The amount of fluid that is not easy to make up may collapse.

"What should I do?" Tangled, really tangled. Ouyang, they were all present. "How much do you estimate the bleeding?"

"Within 200ml." Zhang Fan clenched his teeth and said, it's too difficult to control such a large area of damage at this amount.

"QingChuang, I'm responsible for the accident! We can't stand idly by. " Ouyang said seriously that she was an expert in her heart. Zhang Fan said this amount. After she evaluated it in her heart, she ordered it. She believes that Zhang Fan is willing to take this responsibility. This is the real leadership, with technology and responsibility, and can reduce the pressure for his subordinates.

"This amount is not easy to control." The director of the burn department of the general hospital doesn't believe it. How big is 45% of the scalded area? The front chest and back add up to 18%.

Ouyang looked at Zhang Fan, "yes, we can guarantee this amount."

"OK, then prepare for debridement."

The wounded were so miserable that they were almost cut into strips by Zhang Fan. Then they were washed with disinfectant by nurses. The scorched black faded, but corrupt organizations began to appear.

At this time, the body is actually doing all kinds of fighting. Fresh granulation began to climb slowly and slowly around the reserved blood vessels, but a large number of inactivated tissues that could not be removed also began to cultivate a large number of bacteria, then excreted toxins, and these tissues began to rot.

In other words, it depends on who grows up fast and who can press who. The area is too large and the damage is too serious. The new organization is certainly not the opponent of corrupt organizations. At this time, doctors are helpers.

Debridement! This treatment is very painful for patients, but it is not easy for doctors. In particular,

some debridement of gas gangrene or debridement of diabetic foot is just like a criminal law. Once debridement, it is estimated that the patient will have a new understanding of life.

Overnight, the inactivated tissue began to develop towards decay. The originally pink and tender tissue began to turn white, just like the dried cured meat that has not been dehydrated. Press it gently and it will shrink rapidly without any elasticity.

This does not count, especially some tissues near the outer layer began to appear white pus, emitting a stench that can almost suffocate people. The originally clear liquid also began to become turbid.

Gently press the edge of the wound, mixed with the scorched black powder separated with the inactivated tissue, like milk chocolate mixed with Oreo biscuits, slowly flowing out, too much, slowly flowing, even people have a desire to lick with their tongue!

Some tissues with fascia have been inactivated under high temperature, but the toughness of fascia has not been damaged. At this time, due to the corruption of the internal body, it produces gas and slowly starts to swell like a balloon.

The nurse quickly prepared the debridement bag, "let me be your assistant." LV Shuyan followed closely.

"OK. Let's go. " The two entered the intensive care unit, and the thin disposable masks could not stop the pungent smell.

"Start with the head. Come on, normal saline. " Zhang Fanyi holds a needle, a cotton ball and scissors in one hand. LV Shuyan, holding a 50ml syringe, filled it with normal saline.

The thin facial skin has long been roasted in many places. It began to fall off after dipping cotton balls and washing with normal saline. Just like the dried ham sausage, the dried skin slowly fell off.

Zhang Fan rubbed and said, "push slowly, this way, this way." Slowly, the necrotic tissue of the face was removed bit by bit. After more than an hour, the face was finally removed. The greasy gray is gone. After thorough debridement, the facial muscles begin to be white with powder, because many muscles have been cut off, and there are many pitted defects on the cheeks.

Chest, back, a little push, a little clear. Normal people may have fever sometimes because of infection due to hand trauma. Moreover, for patients with large-area skin injury, a little decay may cause death, because his first line of defense has collapsed.

The last and most serious place is bilateral thighs. LV Shuyan, who had seen hydatidiform mole, stillbirth and various gynecological inflammatory diseases, almost didn't hold on, "Er!"

Zhang Fan turned and glanced at her. Isn't Zhang Fan disgusting? Disgusting, but one thing must be endured. The more hiccups, the more disgusting. The best way is to take a deep breath and let the smell get used to the nasal cavity, or come in with a mask and an oxygen bottle. There's no other way.

"Devil!" Zhang Fan glanced at LV Shuyan. She was so angry that she didn't care about hiccups. People want face. If you can, why can't I?

The wounded's thighs can't be seen directly. They shine with oil. The white and yellow fat turned out is mixed with semi cooked muscles, which is just like uncooked hand grasping meat.

"Scraper!" Zhang Fan said in a sullen voice. He felt bad too. He had fat, muscle protein and temperature. This is directly the favorite place for bacteria. Even eat and pull, turn it a little, and the more pungent smell comes to my face.

The area is too large, the scissors can't work, and the corrupt body has long lost its toughness. If the scissors are cut down, it will rot as soon as they are cut on tofu brain. There is no continuity.

A curette is actually an enlarged ear scoop. Zhang Fan scraped off the rotten tissue bit by bit along the muscle texture. LV Shuyan stood beside Zhang Fan with a bend, full of rotten fat and muscle.

She regretted that she was about to cry. The fat and rotten fat was put on the bend and trembled with her breath. It's disgusting.

For three hours, the original very basic debridement made them sweat like a super large operation. LV Shuyan was a little dizzy. Pungent smell, disgusting picture, purgatory scene.

The bilateral thighs that could not be seen let Zhang Fan clean up cleanly, as if they had been brushed with a steel brush. Blood beads slowly seeped from the fresh and pink muscles, one by one slowly getting bigger and rolling slowly.

"It's really beautiful! Muscles like marble. " Zhang Fan straightened his waist, looked at his masterpiece and couldn't help saying.

"Here you are!" LV Shuyan really couldn't help it. With marble muscles, she seemed to think of something. She put the bend into Zhang Fan's hand, covered her mouth and ran out of the ICU quickly.

Out of the ICU ward, LV Shuyan threw up "Er! Eh! " In the morning, laver, tomato and egg soup sprayed out along the corners of my mouth, and tears slowly overflowed from my huge eyes!

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Treatment, all-out treatment. The small stone city hospital also began to become a focus. With the arrival of the families of the wounded and martyrs, more and more leaders gathered in stone city.

"Now if you have any difficulties, tell us where you want experts and what materials you want. He must

stand up. Please, everybody! " A big leader stood at the door of ICU and spoke to Ouyang with red eyes.

Because the treatment of the wounded was good, Ouyang was also completely confirmed by his superiors.

"Quan'er, why did you leave? What should I do? You are so cruel! Mother's heart is broken to pieces! Quaner! My spring! " The funeral home, the martyrs' parents and their families arrived. The white haired mother cried and fell in front of the child's portrait.

"Well! Um! Yes! " A father cried silently and couldn't stop crying. He rubbed the picture frame in his arms, how sad he was, his trembling lips and soft legs. The more he looked, the more he felt distressed.

The most shocking thing is a young girl, wearing a white wedding dress and holding the portrait of her fiance in her arms. The family didn't persuade her " He's gone. Why do you have to. You will live again! "

"He's gone, he's gone! I have to send it. He promised me to pick me up and pick me up. Now he has broken his promise and can't pick me up, so I'll send him away. "

The setting sun in northern China is her red makeup, and a mountain pine and cypress is her bridesmaid. In this life, I only become double with you, but he broke his promise and he left. The beautiful bride, with a happy face, seems to be really getting married. It's really like being held by her lover.

"Everyone, salute!"

There are no soldiers and people in rows who do not shed tears. The national flag was spread and the gun was fired to see them off. What could not be sent away was sadness.

In front of the window of the ICU, the parents of the young wounded, young parents, fainted directly when his mother saw her son through the window.

"We'll go all out and definitely let him recover." After sending the martyr's detachment with swollen eyes and hoarse voice, he didn't know how many times he had faced this situation.

Who has no home, who has no parents, who has no children. Be a son and a parent. Really, every accident, every farewell, is like a heart baking.

"At present, the patient has vital signs, but it can be said that he is still on the edge of the cliff. The

exposure of a large area of skin and its tissues has the possibility of bacterial infection all the time. Therefore, after our discussion, skin grafting must be carried out." All the therapists, leaders of the armed police and local governments gathered in the stone city hospital to discuss the treatment of patients.

"Well, what do we need to do?" The armed police leader asked seriously that he did not understand medical treatment, but he also wanted to do something for the wounded lying in bed.

"Skin grafting, small area can also be autologous skin transplantation, such a large area of damage, only allogeneic transplantation. However, the exclusion is too strong, and the quality of life of patients in the future is also a big problem. " The director of the general hospital continued.

Scald, especially after a large area of scald, is very dangerous when the tissue originally wrapped by the skin is exposed. Clinically, it is generally early to transplant a large area of pig skin to patients, although it can establish circulation. But it's too repellent.

"Is there a better way?"

"Immune tolerance genes are inserted into allogeneic skin." The crowd was silent. At this time, Zhang Fan spoke. There are two material options for large-area scald in the system. One is gene induced stem cells to form autologous skin. The other is to implant immune tolerance genes into allogeneic skin.

Stem cell induction takes too long. The wounded can't wait now, so they can only choose the second one.

"This has not been used clinically."

"Why? Technology is not up to standard, or? " The leader asked anxiously. He couldn't understand the conversation of a group of doctors.

"One is the cost, the second is the complexity of surgical operation. The cost of a large number of immune gene implantation is quite huge, and the operation is also very complex. Because it is allogeneic transplantation, a slight lack of tissue will produce huge rejection, resulting in skin graft failure. "

"What kind of genetic technology does our country have?"

"Yes! The Chinese Academy of Sciences has successfully developed it. " After all, he is an expert of the general Army Academy, and he is still clear about some research in the forefront of scientific research.

"Then ask them to do it." With a big hand from the leader, what are you afraid of? As long as you are at home, you don't have to worry.

"Well! The development has been successful, but the success rate of surgery is not good. There are no reports of large-scale surgery. " The experts of the general hospital are a little embarrassed.

"Yes!" The leaders of the armed police turned red with anger and said for a long time that they couldn't.

"I can do this kind of operation!" Just when the two sides were embarrassed, Zhang Fan stood up.

In the conference room, the sound of a little whispered discussion suddenly fell silent. Everyone looked at Zhang Fan and the young doctor.

"Are you sure?" The leadership level sitting here is not low. Although Ouyang knew Zhang Fan, he still asked quietly.

"Yes!" Zhang Fan nodded and whispered back.

"Well!" The director of the burn department of the general hospital is tangled. This material has not yet entered the clinic. What do you do? Asked or not, he was really tangled.

"Are you sure?" The local leader hasn't spoken yet, the armed police leader said very seriously.

"OK." Zhang Fan's indifferent face is not for others, but for his not giving up. Zhang Fan also wants to fight.

"There are no jokes in the army! You have to weigh it. " Really, the leader is deeply afraid that the young man is not sure to talk casually, so he wants to scare him first. Although he doesn't know medical treatment, he knows human nature.

"I'm sure!" Zhang Fan said again.

"OK. Then contact experts from the Chinese Academy of Sciences. " The armed police leader looked at the local leaders and said seriously.

Zhang Fan doesn't do much in the system. It's not that he doesn't have a liver, but that there are too many operations in medical treatment. If a military order is issued, there will be liver.

It takes three days to extract immune inducible genes, that is, Zhang Fan has three days to practice.

At the beginning, Zhang Fan had done this operation two or three times in the system. Is two or three times enough for this large-area scald? Of course not enough. What if not enough? Of course not.

"Can you do me a favor?" After the meeting, the experts of the general hospital wanted to talk to Zhang Fan, but Zhang Fan couldn't take care of it. He didn't have much time. He grabbed LV Shuyan and Zhang Fan said.

"Well! what? What do you want me to do for you?" LV Shuyan is a little curious. The girl has lost a lot these days and has a bad appetite.

"Don't bother me these three days. No matter who comes, don't bother me. Just put the food at my door every day. Can you help me get in the way?"

"What are you doing?" LV Shuyan asked in wonder.

"Just say you can't do it." Zhang Fan is a little impatient. He can't help it. Time is too tight.

"All right." LV Shuyan said, but the girl scolded Zhang Fan in her heart: "what attitude! Don't you have patience to beg!"

"Thank you. Remember to eat more food every time. Bring as many as you can. I'll go first."

"Hey," LV Shuyan wanted to say something. But Zhang Fan has left and can't even enter his room. Next is the liver.

Chapter 366

This large-area skin grafting is directly a body reconstruction operation. Close the phone, close the curtains and put the water cup at the head of the bed. After washing his face, Zhang Fan entered the system.

Large area allogeneic transplantation is too difficult. There is a slight lack of tissue link, the tissue and body are exposed, and then there is a large area of rejection, followed by a complete dumping like duogunuo.

Surgery, if not innovative surgery, how can we improve the cure rate? Without others, only hands are familiar. The sweat on Zhang Fan's face lying in bed takes too much energy. It's not like an orthopedic operation. The whole process of this operation pays attention to a fine and quite expensive.

Keep doing surgery, keep practicing. Thirsty, I picked up the water cup to drink a little, but I didn't dare to drink more. If I drank too much, I had to go to the bathroom, sip a little, wet my mouth and cheat my body.

Dermal transplantation, mucosal transplantation, fat transplantation, fascia transplantation, non-stop liver. From morning to night, Zhang Fan's liver was dizzy, trembling, flustered and disgusting.

He knew that he had to stop. His blood sugar was too low and his body protested. Come out of the

system and get up slowly. The time of liver is too long, and the muscles of the whole body have been sour and soft. Open the curtains, the sun has set.

Hold the wall. Yes, hold the wall. With the roar of the intestines, Zhang Fan slowly opens the door of the room. If LV Shuyan doesn't put the food at the door, Zhang Fan is estimated to starve to death here.

LV Shuyan was also a believer and did not give up Zhang Fan. There was a small table beside the door of the room, full of food. Regardless of the cold and heat, Zhang Fan stuffed a steamed stuffed bun first. The steamed stuffed bun with a big fist was dry.

With a little strength, he took the food into the room and ate it quickly. The food in the hotel is still good. Do you want meat, noodles and dishes? What's the taste? Zhang Fan finished before he could taste it.

After eating, he put the plate at the door. Zhang Fan thought about it and wrote a note: please have more. Meat is the best and fat is better. Thank you!

"What is he doing?" Ouyang wants to find Zhang Fan, but LV Shuyan gets in the way.

"He didn't say, just said don't disturb him these three days."

"Estimated to be in adjustment state. OK, then don't disturb him. How did you get it? "

"I brought him to the door and he wouldn't let him in. This is the note he left at the door. " LV Shuyan handed the note to Ouyang.

"Well! Do you need meat to adjust your state? " Ouyang didn't say this, but her strange expression had betrayed her idea, and LV Shuyan didn't understand it.

"Isn't it bathing and dressing, sitting quietly and eating light! Is this guy going to gain weight? Well, fat. " LV Shuyan thought, it seemed a little disgusting again.

Biological research center, Chinese Academy of Sciences" A letter from the Armed Police Corps. " The director of the center looked at the telegram in his hand strangely and handed it to his partner, Professor Li Housen of the golden mean.

Li Housen is the leading figure in allogeneic transplantation in China. Dr. Mayo Clinic graduated from Korean American Master Li Yaosheng. Mayo Clinic is the best allogeneic transplantation in the world. In Mayo Clinic, almost all cosmetic allografts are monopolized by Korean professors, which may be a talent. It can also be said that as long as we talk about cosmetic surgery, there is no way not to talk about South Korea.

"45% burns! Allogeneic anti rejection gene implantation and transplantation! This ~ ~ "he wanted to say it was nonsense, but he couldn't say it when he looked at the director of the center.

"What should I do?" The director of the center is also tangled. This is a telegram sent by the Armed Police Corps. He can't help but ignore it.

"I'll go myself." Li Housen said after holding his eyes.

"OK, why don't you go and see what's going on."

In the capital, a small remote airport, a plane is ready to take off. Li Housen took off with the required materials and three assistants, targeting the frontier stone city.

Zhang Fan of Stone City Hotel continues to work hard. He will never come out until his hair is soft and weak. What this kind of thing pays attention to is durability and persistence. We must make the muscle achieve a kind of memory.

Professor Li Housen arrived. In the hospital conference room, "it is possible to have a smaller area, but the difficulty of this large-area scald transplantation is not a little, but an increase in the magnitude, which requires too high the continuity and accuracy of doctors. The area is slightly larger, and the success rate of mice in the laboratory is less than 10%." Professor Li Housen said in a deep voice.

"Which young man?" The leader of the Armed Police Corps had a dark face. He was still holding a glimmer of hope. His heart was cold when he heard what experts from the capital said.

"I'll call him!" LV Shuyan got up quickly. The atmosphere was too depressed. The doctors in the audience looked gray. Professor Li Housen said no. is there still a chance? Is there no hope for the wounded lying in bed?

Day and night guard, go all out treatment, the final result is so sad.

"Zhang Fan! Zhang Fan!" LV Shuyan hit the door panting.

"Coming!" Weak Zhang Fan came out of the system, and he frowned. Get down and open the door.

"What are you doing? Why is your face so pale. Come on, the expert from the capital is here. He doesn't agree with your operation plan." LV Shuyan ran away with Zhang Fan.

"Wait a minute! I'll take a bite. "

"Well! When is it? "

"I have to take a bite at any time." Zhang Fan said something, picked up chopsticks and couldn't care about anything else. Zhang Fan swallowed the cold fat meat with a frown and chewed it casually. The cold fat meat is really not delicious and too greasy.

The oil and water in the corners of the mouth and the sliding throat up and down made LV Shuyan sick by Zhang Fan again.

"You want a breath?" The more he didn't want to see it, the more he unconsciously stared at it. Zhang Fan stared at LV Shuyan and said.

"Well! Eh! " LV Shuyan turned and went into the bathroom. I don't know. I thought what happened to her.

"For head transplantation, first do Island transplantation, connect the facial soft tissue of the wounded on the left and perform free suture. Combined transplantation was performed on the back to pull the fascia lata and restore the latissimus dorsi muscle flap. For blood vessels less than 2mm, precise and noninvasive repair was performed to eliminate tissue exposure.

For the leg with the most serious injury, myocutaneous flap transplantation should be done directly. In this way, the patient can preserve the skills of both lower limbs and achieve the later functional recovery. " When Zhang Fan enters the office, he doesn't talk nonsense and starts talking directly.

Time is running out. He doesn't want to waste time.

"The surgical plan is perfect. However, the difficulty ~ ~ "Li Housen nodded unconsciously." the young man's ideas are only right, but he may not be able to do it. "

"Give me the operation and give you the anti rejection allogeneic skin required during the operation. We don't have much time. The patient's skin exposure has been the fourth day. Next, the bacterial peak of the second wave is coming. If we don't do the operation before the second wave, we won't have a chance." Zhang Fan looked at Professor Li Housen and said quickly.

"Well!" Professor Li Housen can't speak. Zhang Fan directly learned from Ouyang, put aside the disputes, said the key points and said the consequences. Anyway, I'm sure the rest is up to you.

"Professor Li, please!" The black faced armed police leader directly stood up and saluted Professor Li. He heard it. This was his last chance.

"Ah! ok Give me a training room and I'll prepare. " Zhang Fan is not particular about it. He directly

roasted Professor Li on the fire.

After listening to Professor Li Housen's promise, Zhang Fan turned and left " Hey, what are you doing? "

"Call me when the transplant material is ready!" Zhang Fan said that before the operation, no matter whether it was successful or not, no one dared to disturb him.

Because this is the last hope of firefighters in bed.

Chapter 367

In middle age, everything is stable. Especially those who have become leaders in a certain unit or workplace are more stable. The president of stone city hospital prefers the hospital to be half dead rather than risk a breakthrough. Medical breakthroughs come at a price.

However, technology is not good. He is really a good hand in logistics. It's really not easy for leaders to visit, experts to gather and do a good job in hospitality. He and the fat vice president did quite well. Although the ingredients are not rare, they are exquisite.

Early in the morning, a person who is willing to drink dairy products, a bowl of camel milk, a dish of green wild vegetables, or a bowl of red jujube millet porridge, all kinds of pasta with flowers.

At noon, four dishes and one soup did not exceed the standard, but beef, sheep, meat, chicken, duck and fish specially invited cooks with good reputation from outside. Not only let the leaders eat well, but also don't let the leaders worry about violations.

Zhang Fan specially ordered fat meat. He specially found someone to make Dongpo elbow. Anyway, there is only one purpose, not to make meritorious contributions, but to make no mistakes.

In any case, the credit is still there. Good food makes Zhang Fan reduce a lot of pain in swallowing fat. These three days, thanks to Zhang Fan's daily exercise, otherwise this kind of overload training, it is really estimated that the liver can't come down, and there is no one from liver surgery to hypoglycemia.

Allogeneic anti rejection gene transplantation, how to say, in fact, it is also simple to say, that is, the piglet skin is dressed like human skin through various immune inducing factors, and then placed in the human body, so that some battle factors of the human body feel that they are their own people without attacking.

The rejection of the human body is super powerful and can be regarded as immortal. If you don't say tumor or super immunity, you'll say that your finger has been pricked. Once it cannot be pulled out in a short time, the body will mobilize all kinds of troops to kill it.

If you can decompose it, you will decompose it. If you can't decompose it, you will wrap the foreign body around a wall, and then hang it in the air like a silkworm chrysalis. The internal battle of the human body is so awesome.

Then, your body is like a battlefield, with high fever, sweating and all kinds of discomfort. After the foreign body is solved, the body will dissolve the soldiers and horses.

Years later, as long as you live a long life, this wrapped foreign body may grow out of your skin like a fruit, like an apple hanging from a branch, or a small bag may grow on your forehead.

It is conceivable that such a large area of pig skin is covered on the human body. Among others, this kind of cell battle can toss and kill the fragile system of the wounded.

This kind of scald transplantation in the early years is emergency, long-term anti rejection treatment after operation, which is very painful. Most people can't get through it.

Gene induced anti rejection can solve this war problem very well. At this point, I have to say medical skills. In fact, medicine is similar to other technologies.

It is divided into technique and technique. In short, this gene induces anti rejection. I don't know how many experiments, funds and time it took to break through the human body's genetic barrier.

The technique is the surgical scheme formulated by Zhang Fan. Many, many world-famous doctors do not operate well, but they operate well and can invent new treatments.

You can't walk fast on one leg. You can't do it without skill. Zhang Fan's current level is to hone his skills, not to mention surgery. Surgery in the system is almost a routine, and his road is still far away.

Many surgical procedures, after being invented, are often carried forward not by the inventor of this operation, but by other doctors.

This is also one of the difficulties in medicine. There are too few people who want to combine art and

technology. Once combined, they will be like gods. For example, master Qiu Fazuo, master Huang Jiasi and Master Wu Mengchao are all great masters of art and technology.

"Professor, do you think he's talking nonsense? This kind of operation plan was made after a little effort. But ~ ~ "Professor Li Housen's assistant said with a little worry. Although the meaning was clear before he finished, he didn't believe it.

Large area body induction costs money, but it also costs people. In these 72 hours, he has to monitor it in turn with other assistants. He doesn't want to waste his efforts.

"Hehe, I hope he didn't talk big. I guess this situation should not talk big. The older doctors can't do this kind of operation.

Young and inexperienced, alas! I don't know when it will be popularized clinically. " This is Professor Li's painstaking efforts, but it is because of the difficulty of the operation that it has been unable to be applied clinically.

If the clinical promotion is not open, we can only publish papers and put them on the shelf. This is not what Professor Li wants.

"Well!" Although Professor Li's words are not aimed at his assistant, as a doctor of medicine, his face brushes and turns red. A doctor in his thirties is reasonably young, but because he has been studying and doing scientific research, he has little clinical contact, which is his weakness.

Zhang Fan worked hard in the system. This operation is a very awkward operation. The operation is very large, but the means are very small.

The largest of various channels in the superficial skin is no more than 2mm, and whether it is lymphatic vessels, capillaries or various secretory channels, it is an important place for the body to station and spy.

Therefore, the whole operation is almost completed under the microscope. After a slight endothelial injury, the endothelial spies will definitely inform the soldiers in the body at the first time, then exposure, followed by war, which is not vague at all.

Many small hand muscles finally achieved memory. After more than 60 hours of sleepless, Zhang Fan finally got down.

Dizzy, after coming out of the system, Zhang Fan finally realized what is Xuantian dizzy. I'm too tired. I have a few hours to rest. I quickly wolfed down the melted elbow meat in the mouth, and ate a bowl full of elbows.

The enriched stomach alleviates the sequelae of hypoglycemia. Close your eyes and snore in an instant. Too tired, Zhang Fan, who never snored, fell asleep. The surgeon, the body, must have a body as strong as an ox.

In the incubator, Professor Li's assistants alternately stared at the materials in the Petri dish. The pigskin with a little powder in white was slowly changed and modified.

After all, Professor Li is the leading transplantation expert in China. The big winners in transplantation in Northwest China also gather from all directions. Even if the operation is unsuccessful, it is good to have a look at this difficult operation. After all, failure is the mother of success. It's also valuable to accumulate this hard-earned experience once more. Maybe we'll break through it.

Transplant doctors have come from Sanchuan, Shaanxi, the army, the air force, Lanzhou, niaoshi and some famous hospitals in the northwest.

In the desolate Gobi stone city outside the Great Wall, Dana of the northwest medical community gathered for a time.

"How's it going? Do you think there is hope?" The army doctor talked with the air force doctor. There is a clear distinction between local hospitals and military hospitals.

"It's hard to say. I also did it last year, which was much smaller than this burn area, but I don't know which link went wrong. Finally, the rejection was serious, so I had to do anti rejection treatment. Finally, the family gave up because of financial problems, alas! "

"Lao Zhang, I heard that your doctor graduated from LAN city this time? Well, are you familiar with it?"

"Well! Not much. " The professor at Lan City hospital was a little embarrassed.

Yan Dehua, director of the immune transplantation department in Sanchuan, chatted with Professor Li in the hotel room.

"I have also done several cases. After the area exceeds 5%, the success rate drops sharply. If the scald area is less than 20%, it is unnecessary to do autologous transplantation. For a while, I thought there was something wrong with this project. Later, the younger martial brother who was several years younger than me did 22%. "

"Is he here?" Professor Li's eyes lit up and asked hurriedly. To tell the truth, he didn't report any hope to Zhang Fan. How can an unknown person complete it? That is, he had to come because of the pressure from the military, police and government.

"I went abroad to earn dollars! Hey, don't talk about him. Why, do you have no hope for the chief surgeon? "

"What do you think of the little doctor in the grass-roots hospital?" Lao Li's heart was aching. People with a little level were either poached by money or attracted by various temptations.

"If you can stand up under this pressure, I hope it's not that ignorant people are fearless." Professor Yan Dehua of Sanchuan sighed and looked out the window at the desolate Gobi desert.

For a time, the atmosphere inside the hospital was all kinds of weird. Say no, no one dares to take over. Say no, but everyone is not optimistic about Zhang Fan.

The leaders of the military, police and government are also tangled. This is not something that can fail again. One failure is equal to human life. But without surgery, the bacteria that follow will kill people. Really, it's difficult for them.

Early in the morning, although Zhang Fan's liver was dark and dizzy, he was a systematic person after all. He recovered after a few hours of rest. Standing in front of the bathroom mirror, he gently washed his face and dried it slowly.

The more important the operation is, the more stable it is before the operation. The operation time will not be too short. Zhang Fan didn't drink dairy products, ate an egg, simply drank some salt and boiled water, and got up and went out.

The moment he opened the door, he saw his comrades in arms. All the people from the tea vegetable city hospital were waiting quietly at the door of Zhang Fan. There was no one else.

"How's Zhang Fan? What do we need to do?" Ouyang said very gently. The experts from all directions did give the old lady a lot of pressure, but she bit her teeth in front and blocked several experts who wanted to communicate with Zhang Fan. She believes him!

"Thank you, Dean. It's all right. Don't worry." Zhang Fan smiled gently at Ouyang. He was still so shy and reassuring. The formula didn't change!

"Director gulee, Dr. Lu, how about accompanying me on the stage?" After comforting Ouyang, Zhang Fan turned to gulina Zha, director of Dermatology, and LV Shuyan.

"Hehe, there's no problem." Gulee smiles like a flower.

"OK!" LV Shuyan also said with a smile.

"Directors, how about standing on the platform for me?" Zhang Fan then said to the directors.

"OK!" This is a hospital group, a team led by a strong leader!

Outside the window, elm leaf plum is so beautiful in the scorching sun.

Chapter 368

Let's go, a group of people set out quietly. Only the rustle of stepping on the hotel carpet. Ouyang and the directors are like escorting their children to the college entrance examination.

The tenacity of the frontier people is incisively and vividly demonstrated in Ouyang. If he meets a slightly weaker Dean, it is estimated that Zhang Fan has no time to train.

Zhang Fan's luck is so good. He is so happy to meet such a united colleague and have a dean who protects his calf like an old hen.

Only in this system can we understand the value of this thing. Doctor, you can't, you can quit, but once you do it, honor and danger go hand in hand. It's really happy to have a leader who can shelter you from the wind and rain.

After two years of work, Zhang Fan not only conquered himself, but also was recognized by his colleagues. Time is not wasted, enough!

"Here is the test report for the past three days. I've summarized it all. At present, the other items are good, but the temperature has shown signs of rising. " Ren Li, director of the Department of Cardiology, handed Zhang Fan a summary of the laboratory report.

"Thank you, director." Zhang Fan was moved with the test sheet pasted together. Zhang Fan was really moved that a senior director could prepare preoperative materials for him so attentively.

"You're welcome."

In front of the ICU window of the hospital, leaders gathered, family members gathered, and all the big winners were in place.

"How's it going, Doctor Zhang?" The leader of the Armed Police Corps looked eagerly at Zhang Fan. If Zhang Fan repents at this time, it is estimated that he can eat Zhang Fan.

"No problem. I'll check the ward first. How's the operating room prepared? " Zhang Fan nodded and smiled. Family members and various experts looked at Zhang Fan.

"It's all ready. The microscope, surgical materials and disinfection are all properly prepared as you said." The president of stone city hospital said quickly.

"OK, rounds." Wearing isolation clothes, Zhang Fan took the lead in entering the ICU. Like Professor Li

Housen, he put on his isolation suit and came in. Isolation ICU can't enter too many people. Foreign experts queue up consciously.

"Director Yan, please." The doctors said one after another.

"Well, I'll go in and have a look." Professor Sanchuan Yan Dehua followed in.

"Vital signs are OK. The body temperature rises slightly, the skin has changed membrane, and bacteria have been stationed. " Professor Li Housen said softly with sterile gloves. He didn't know whether to talk to himself or to Zhang Fan.

In these three days, he came to observe the wounds of the wounded as long as he had time. The area is too big to make any mistakes.

"Yes! Whether external or internal antibiotics are used, they are to buy time for the operation. Now barely through the shock period, but without surgery, sepsis will definitely break out in three days. We must thoroughly debridement before operation. " Zhang Fan didn't speak, but Professor Yan Dehua of Sanchuan got into trouble.

Although they haven't spoken to Zhang Fan in stone city, they are all doctors and have a benevolent attitude. Although they are not optimistic about Zhang Fan, they have to start now. Therefore, the old man tried his best to explain the key points before the operation. Although he didn't tell Zhang Fan clearly, there are only three doctors in ICU.

Zhang Fan didn't say anything. What he said now made them uneasy. He simply didn't say anything. He looked carefully and checked carefully. Then, turn on the pager: "come in, a nurse. Take the camera I told you. "

The nurses in stone city are supposed to be skilled, but they are not familiar with Zhang Fan after all. It is most appropriate to cooperate with Zhang Fan for many times at this time. The broad isolation clothes cover her young face, but can't cover her proud figure.

"Normal saline infiltrates gauze to cover the eyes of the wounded." Zhang Fan calmly commands Baoyin.

"Teacher, please help me with my camera." There was only one nurse. Zhang Fan's tone was serious. She didn't dare to give her camera to Zhang Fan and chose a kinder Li Housen.

"OK."

Mending, not sewing sacks. We should not only save people, but also achieve the greatest beauty,

especially the repair of the wounded's face. If there is a long suture scar, even if the wounded's body recovers, his heart will be a permanent scar in the future.

After Baoyin covered the patient's eyes with saline gauze with sterile gloves, he made a sign to the outside, and the nurse outside turned on the fluorescent lamp.

Zhang Fan began to swing the patient's position, ready to take photos, the characteristics of plastic surgery.

This kind of reconstructive surgery must be compared, and dynamic preoperative and postoperative data must be retained to prepare for the next operation. Zhang Fan is in position and Professor Li Housen takes photos. This kind of photography is very exquisite. Well, after all, he is a second to none professor. His level is really good.

"Click! Click! Click! " Keep the worst side of the soldiers forever. In addition to the medical special issue, this kind of photos are estimated to be the place of horror in other places.

"Do the last oral care before operation and deal with the surface wound edge." Zhang Fan said one and Baoyin did one. After finishing, Zhang Fan and Baoyin checked together.

Lao Yan and Lao Li helped Baoyin carry dishes and handed over instruments without any identity at all. The more meticulous Zhang Fan did, the more assured they were.

"Come on, give me a hand and roll over." Zhang Fan spoke to Professor Li Housen and Professor Yan Dehua. You're welcome in front, and you're welcome now.

"Baoyin, come on. Do perianal cleaning. " Because there will be thigh surgery, preoperative cleaning around the anus is also very important. After handling the preoperative preparation, Zhang Fan said, "enter the operating room."

The patient had a special channel. Zhang Fan came out of the ICU, nodded to the people, and said to Guli and LV Shuyan, "enter the operating room."

"Please!" The leader of the Armed Police Corps looked at Zhang Fan with bright eyes.

"Yes!" Zhang Fan nodded.

"Doctor Zhang, please be careful! The child is still young. Really, he is alive. Please. I kowtow to you! " Hurt in her son's body, hurt in her mother's heart. In just a few days, her middle-aged mother is old and not like.

"Elder sister, don't do this. Don't worry. You must be attentive and go all out." The wounded mother, who could not kneel down supported by Zhang Fan and the head nurse, was full of tears. Now she is so helpless. Zhang Fan is like the only straw in her drowning.

"Dr. Zhang, thank you, thank you. Hey! My child is so poor! " The long cry can't send out the pain in my heart anyway.

"Head nurse, help your family to have a rest." Zhang Fan was afraid to tremble and move. This kind of operation can't have a trace of mistakes. In the system, he failed many times in the early stage. It's really difficult. Others can't believe it.

With the cry of the wounded mother, Zhang Fan led the surgeon into the operating room. Professor Li Housen is not good at surgery, but he is the inventor of this kind of surgery and must enter the operating room.

Professor Yan, director of the transplantation Department of Sanchuan, also entered the operating room. Although the whole operation was performed under the microscope, too many experts came. With Zhang Fan's consent, he opened the camera in the operating room.

Zhang Fan and others enter the operating room. The directors of various departments in tea vegetable city stay in the operating room next door and are always ready to help Zhang Fan.

"Anesthesia is complete and the operation begins." Anesthesiologist Liu Yaowen whispered to Zhang Fan, who closed his eyes and rested.

"Hu" Zhang Fan opened his eyes, very divine eyes opened.

"Debridement begins."

The patient's wound was thoroughly cleaned with ether wipe and alcohol cotton ball.

Wash hands, lay sheets and cover holes. Then the itinerant nurse adjusted the shadowless lamp, "how about Dr. Zhang."

"OK!" After that, Zhang Fan breathed out slowly.

"The operation begins."

The pink flowers swayed in the breeze, and the slowly falling dew was like the tears of the wounded mother.

Chapter 369

Allogeneic transplantation with anti rejection gene is simply to induce the small pig skin and active pig skin by implanting various factors to make it look like the gene of human skin, and then plant it on the

human body to make them perfectly combine with the human body.

In a word, Professor Li Housen and his team have been struggling for nearly ten years. When they came back from the United States, they began to study. He didn't perform the surgery as well as the Korean American brothers. However, his strength lies in research. Finally a little eyebrows, the results in the clinical promotion can not open, really, Lao Li's heart is broken.

"Small curette, syringe."

At the beginning of facial repair, Zhang Fan gently scraped the slightly white skin along the texture with a scraper again. He must first transplant his own mucosa and fat.

Scald is too hateful. It's not like chopping and chopping, but a very complex compound injury.

After removing the scalded tissue, the injured area is a lot of pits of different sizes, just like the ground bombed by shells on the battlefield, and so is the face of the wounded.

"Open your mouth." LV Shuyan used the mouth opener to open the patient's mouth without disorder. Zhang Fan has a syringe in his left hand and a scalpel in his right hand. While flushing, use the scalpel to start selecting materials along the oral cavity.

The face of the wounded was seriously damaged. Fortunately, the eyes and nose were preserved, but the lips were directly burned like rotten plastic.

If this place is not repaired, it will only be tighter and tighter in the future. Because the muscle texture around the mouth is a circle of circular muscles, in fact, it is a little rough. The structure of this place is similar to that of the anus. There is a ruddy lip.

To do the best is Zhang Fan's belief. The mucous membrane in the mouth is selected to create a new ruddy lip.

This mucosa must be provided by itself, and there are very few places to obtain materials. Only the oral cavity and Yin (a) tract can supply limited mucosa. Therefore, for male patients, it can only be successful at one time, otherwise there is no place to obtain materials.

"Hemostatic cotton." Zhang Fan cut off a rectangular mucosa with vascular pedicle in the buccal part of the mouth with a scalpel. " Needle holder, absorbable thread. " Suture the mouth.

"Baoyin, put the mucous membrane into the bending plate and pour in the physiological solution."
Zhang Fan explained.

"OK."

After the mucous membrane is placed, it is followed by fat. The best place for fat transplantation is the abdominal fat. The fat in other places is too dense and easy to liquefy and necrosis. It's too easy to take fat. Open the skin and cut it with a scalpel. After cutting, suture it directly.

Repair first. In fact, it is simply to dig the east wall to make up the west wall. LV Shuyan is about to pinch her hands. The girl can't see fat now, especially this kind of fat meat with very fat abdomen.

After preparing the materials, Zhang Fan began to repair the crater like face and filled it with fat first. The fat transplantation is very strange. The fat taken from the abdomen will be absorbed in other places.

Moreover, the absorption is very strong. Like being eaten by the body, it can almost reach 30% of the filling volume. Therefore, when filling, you can't fill as much fat as much pit. You must adjust it to prevent future absorption. Without adjustment, there will be collapse after transplanting piglet skin. The bigger the pit, the worse the collapse.

Professor Li Housen and Professor Yan Dehua watched Zhang Fan carry out the operation in an orderly manner, and the heart originally mentioned was slightly put down.

Although they didn't speak, they looked at each other. The meaning is clear: "from the current technique, it's not a mallet!"

Fat transplantation has a liquefaction process. The larger the fat area is, the more serious the liquefaction is. Because the larger the area is, the more damaged fat cells are, so it's best to extract fat beads under a microscope. How big is this, 4-6mm. The first to use this is the Korean beauty industry.

Fill the pits with fat one by one. The face originally scratched by Zhang Fan seems to be stuck with the cream of the birthday cake, piece by piece. It's as like as two peas. They are all white and are all raised.

It's really like a person with a bloody face, and then pasted with a piece of birthday cake.

After filling, start covering the allogeneic skin. It's time to show technology, especially Professor Li Housen, who is almost holding his breath.

In the large conference room outside the operating room, a group of Northwest transplant recipients

whispered. The leaders who had watched it left after reading it for a while. It was too boring to understand! There are only these experts left.

"Lao Chen, yes, you undergraduates in LAN city are so awesome. It's only a few years since graduation, so skillful. "

"Nonsense, what do you think."

"Shameless stuff, as if it were your student." The other party couldn't chat. The professor who spoke was a little angry and full of stomach Fei.

In fact, his tone is a little contemptuous of Lanshi. After all, he is closer to the south.

"It's OK. It depends on the next step. Any doctor in our department can do it." A director of the army hospital said to the air force doctor nearby.

"Yes!"

The pink and tender pigskin is estimated to be still a baby pigskin. It has been soaked in various potions and is a little swollen. It rolls together like a blistered Guodan skin.

"Alice pliers, four. Director, come and help me open it. LV Shuyan, come and open it slowly. Don't use too much force. " The pigskin with vascular pedicle is too thin. If you exert too much force, it may be broken.

When he opened the pigskin, Professor Li Housen's heart almost jumped out of his throat. If you can't do this step well, you don't have to expect anything, and you won't do anything later.

The three men are even, "come on, slowly down, come on, slow, not in a hurry, come to the left, come on, put it." Zhang Fan is also nervous. The assistant in the system can do whatever you say, but not in reality.

"Eye forceps fixed, fast." It was well positioned and completely covered the wounded's face. Look down from the shadowless light at this time. Just like a faceless man, his eyes, nose and lips are all covered.

Fixed, Zhang Fan moves faster and faster. After the piglet skin is separated from the physiological fluid, if the circulatory system cannot be quickly connected, this thing will die.

Start the operation under the microscope and establish the channel first. Allogeneic transplantation can not damage the inner layer of human blood vessels, because various signal factors will be exposed after injury. Once the human body is exposed, it will become a battlefield.

Under the microscope, the hemostatic forceps are opposite to the hemostatic forceps, pinch the blood vessels of the human body and pull off the external mold of the blood vessels. Human blood vessels can

be divided into three layers. A large number of factors are stationed in the inner membrane, the middle layer is the muscle layer, and the outer layer.

The inner layer is the most sensitive, the middle layer is the slowest, and the outer layer becomes sensitive. The inner layer cannot be destroyed. Once destroyed, it can release various factors and transfer various generals. The outer layer can be destroyed and pull off the outer layer of the interface.

Then insert the blood vessel head without outer skin into the blood vessel of piglet skin. The muscle layer of human blood vessel is pasted on the inner layer of piglet blood vessel. The muscle layer doesn't matter. As long as you have clothes to wear.

Then there is the suture. The difficulty comes. At this time, the suture should not only penetrate the blood vessels of the piglet and the blood vessel muscle layer of the human body, but also the inner layer. It is really a Taoist temple in the snail shell. Who dares to do it without hundreds of exercises and muscle memory? Who can?.

One stitch at a time, move forward a little bit. Zhang Fan's slow breathing and countless exercises in the system have already enabled him to produce a feeling of breaking through blood vessels. This is in exchange for countless hypoglycemic symptoms, and all kinds of mysterious dizziness.

Even Professor Li Housen and Professor Yan Dehua, who were on the sidelines of the operation, did not dare to speak out.

Although they couldn't see the specific operation, looking at Zhang Fan's super stable hands, Professor Li Housen's face turned red and kept shouting: "that's it, that's it."

"Too stable!" The experts in the conference room looked more and more poisonous. When they began to sew, they saw it.

"Yes, it's too stable. I just don't know how long it can last. The operation doesn't take an hour or two. Ah ~!"

At this time, the blood vessels are like two intersecting rubber tubes, one covering the other. First suture the front, and then turn over 180 degrees to suture the other side.

Zhang Fan lifted the vascular adventitia. If the fracture is calculated according to this clock face, it should be stitched at 12 o'clock first, and then stitched at the opposite 6 o'clock.

Sew the third stitch at 2 o'clock, the fourth stitch at 4 o'clock, turn over, the fifth stitch at 8 o'clock and the last stitch at 10 o'clock. Each suture has to pass through the blood vessel twice. It's really difficult. It's just like smoking in a gas station. It may explode with one breath.

Every time you sew, bean sweat comes out. It's really difficult to control the strength and continuous output. The left and right hands should cooperate very skillfully. It's as brittle as the inner membrane of

a raw egg. After sewing once, Zhang Fan had to stop and wipe his sweat once to restore the energy of his muscles a little.

"Glucose!" Zhang Fan felt a little dizzy. It took more than three hours for the skin on his face to reach the lower jaw. Greedily drank a mouthful of high concentration glucose and continued.

Small blood vessels, small nerves, micro lymphatic vessels, one more difficult to deal with, one more complex. If the blood vessels are not sutured, the skin is inactive, the nerves are not sutured for a little longer, the skin shrinks, the lymph nodes are not sutured, and the later stage is endless swelling.

What else can I do? Liver. Everyone inside and outside the operating room was worried. The more hopeful, the more worried. The better Zhang Fan performs, the more worried everyone is.

Repair and reconstruct the orbit, stick the nasal cavity along the texture, and repair the lips step by step. Slowly, the original bloody face became acceptable.

"Open the hemostatic forceps!" In an instant, the blood entered the allogeneic skin through the repaired pipe, and the originally pale pig skin became bloody.

"How's it going?" Professor Li Housen asked quietly with a dry voice, clutching his heart together. It's so uncomfortable.

"It should be." Zhang Fan looked at his masterpiece and said slowly, although he can't see a bright smile and rich expression in the future. However, he can walk in the sun and face the world happily.

Chapter 370

The wounded man's face with exposed muscles and fascia was covered with white pig skin, and his smooth blood vessels vaguely seemed to see his smile. Although the color of oral mucosa is not as ruddy and pale as lips, it is always much better than blackened and charred piles of rotten plastic.

"How sure are you?" Professor Li Housen stared at Zhang Fan like a child who saw a lollipop without blinking.

"Well! It's hard to say. " Zhang Fan is sure there is no problem, but he doesn't want to say anything now. I'm too tired. It's almost ten hours. For the first time, Zhang Fan feels that there is still a difference between surgery in reality and surgery in the system.

The light in the system is soft, and the light in reality is dazzling. It seems that there is little difference in a short time, but after ten hours of surgery, Zhang Fan left the microscope and his eyes were obviously dazzled.

Assistant, the assistant in the system does not need Zhang Fan to speak directly. As long as Zhang Fan's operation steps are correct, no matter how fast you do it, others can help. But not in reality. At some key points, Zhang Fan must explain and emphasize that he has to distract himself from the operation of his assistant.

Although the surgery in the system simulates reality, it is simulation after all, and the consumption is still much less. In reality, standing for ten hours really consumes a lot.

Dazzled Zhang Fan is also a little palpitating at this time and overestimates himself. This kind of operation does not mean that he can stick to it. No wonder it is difficult to promote clinically and the requirements for doctors are too high.

"Dr. Zhang, please sit down for a while. Would you like some glucose?" Professor Yan Dehua is a clinician after all. At first glance, he knew that Zhang Fan consumed a lot. He quickly moved the high stool under his ass.

Aojiao's professor was impressed by Zhang Fan. Although it still takes eight to twelve hours to know whether rejection will occur, he knows that he can't do such a stable operation, such a fine operation and such a long time.

"Thank you. Have a drink. I dare not drink more. I have to go on with the operation." Zhang Fan said in a low tone. Dazzled, dizzy, connected, can't run away.

LV Shuyan was a little better. Although she didn't pass the microscope, she was really uncomfortable after standing for ten hours. The empty stomach is like a kitten scratching. Now if you give her a plate of fat meat, it's estimated that she won't be sick.

Gulee was completely dead. He was staggering on the stool. After all, he was old, and gulee felt that the house was rotating under the microscope for a long time.

"Darcy, I, I can't. I can't hold on." It has never been operated under the microscope for such a long time. Although the whole process is to transfer things, Guli stares at every step of the operation. Finally, the facial operation is over. Guli really can't hold on.

She doesn't dare to hold on. It's not a small thing.

"It's OK to change people. Don't worry. Dana is all over the northwest. Dr. Zhang, sit against the wall and have a rest. " Professor Li Housen hurriedly said, and then said to the tour, "come and help."

LV Shuyan was young after all. Her sour legs were able to command, and she slowly moved down the operating table. Guli couldn't do it. He was directly helped down by Professor Li Housen and itinerant.

When he got off the operating table, gulee sat on the ground all at once. He was a little fat and fell to the ground like a ball of mud.

"I'll have a rest, I'll have a rest. Lie down, lie down. Let me lie down for a while. " The fat woman insisted until now. During the operation, she was deeply afraid of affecting Zhang Fan. She really clenched her teeth and insisted. There are two red marks on the edge of the big eyes, which are pressed by the microscope.

LV Shuyan and Guli leaned together. There was no woman's reserved appearance. It was two big words directly. However, no one laughs at them. It's such weird characters that are so elegant and beautiful!

"Who's coming? Be an assistant to Doctor Zhang. " Professor Li Housen spoke to the conference room outside through the fixed walkie talkie in the operating room. He is qualified to speak like this.

In the conference room, "I'll come!"

"I'll go!"

"I'll go." Through the walkie talkie, many people stood up. Zhang Fan's stable technique is obvious to all. At this time, the assistant can't work. They need to help the field. Let's not talk about anything else. They helped set the field.

They are all big winners in the northwest industry. They are really the eldest and not the second. This time is also a symbol of status. Who goes up and who doesn't?

"One person from the military hospital, director Chen of the burn department of the air force, and one person from the local hospital, Professor Yan Dehua of Sanchuan." Professor Li Housen called the roll directly.

The doctors who have not been named are still a little lost. There is no way. This line is like this. They speak by strength.

"OK." I went to brush my hands. Without saying a word, Professor Yan Dehua went out of the operating room to brush his hands.

Zhang Fan leaned against the wall with his eyes closed and his hands inserted in the pocket of his chest surgical suit. With a slight mouth, the itinerant nurse took glucose and inserted a straw in the bottle, stood beside Zhang Fan and fed Zhang Fan. At this time, Zhang Fan really achieved the realm of two legs and one kick, and the diner fed.

But even if glucose doesn't dare to drink more, that is to cheat the mouth. Sugar metabolism will produce water. If you drink too much, you have to pee! I closed my eyes and rested for a while. It was a relief. There are no more golden flowers in front of us, and the house is no longer rotating.

Professor Li Housen stood by Zhang Fan and wanted to say what he wanted to ask, but looking at Zhang Fan's tired posture, he couldn't open his mouth.

"How about now." The leaders of the Armed Police Corps are also uneasy.

"It seems to be going well." The president of stone city hospital can't say one, two or three.

"Hey!"

The most worrying thing is the relatives of the wounded. It's too painful, even if there's no hope. I cried bitterly, and then there's no hope, but now there's hope, and my children still have hope.

Not believing in the Buddha, she knelt at the door of the operating room. No one can dissuade him. She is praying, praying to the gods and Buddhas all over the world. She does not ask for wealth, but only wants the children to survive.

Maternal love is great. The mother knelt for as long as the operation took. The tears dried up long ago, but the heart hanging in the air has always been concerned about the children in the operating room.

"Are you ready?" Zhang Fan didn't open his eyes. It's not that he took a shelf, nor that he was impolite, but that he can have more rest for a while. The subsequent surgery is still very arduous.

"All right. The two doctors finished brushing their hands and are wearing surgical clothes. " The itinerant nurse whispered.

"Good!" Zhang Fan opened his eyes. His eyes, which had lost their luster, recovered and became divine.

"Dr. Zhang, my name is Yan Dehua, a doctor in Sanchuan burn department. Now I'm your help. " Professor Yan Dehua introduced himself very seriously. He didn't bring a professional title or level. He was respected for nothing else.

"Dr. Zhang, my name is Chen Benqi, a doctor in the burn department of the air force. Now I'm your second help. " Like Professor Chen Benqi, he introduced himself.

"OK, let's go. Chest transplantation." Zhang Fan nodded softly.

The chest is almost the same as the head surgery, but compared with the head plastic surgery, the chest does not need to be so complex. For example, the appearance can be repaired if it can be repaired. If it can not be repaired, it can be given up directly, and the damage can be reduced.

The skin of the chest is relatively thin, but there are more lymphatic vessels relative to the face. The human body is really complex. There are n functions of an organ, unknown, known and very complex.

Step by step, repair, suture. Zhang Fan, who entered the operation state, was very calm. Almost the whole process did not speak. Lao Yan in front of the opposite microscope really had a long experience.

"It's too stable. It's really a pair of golden hands!" In front of him, Zhang fan can only feel very stable with the naked eye. At this time, through the microscope, Lao Yan really saw what is stable and what is accurate.

There was no superfluous movement, and the coordination of his hands was quite harmonious. It was almost impossible to see that the hand was his favorable hand. All operations are in place in one step, and there will be no redundant operations.

"How did you practice it?"

Although Lao Yan was amazed at Zhang Fan's operation, he is very awkward now. Zhang Fan's operation is too independent. He doesn't speak. It can also be said that it is caused by people's character.

But during the operation, Lao Yan was almost a second help, not a first help. In many places, he needed an assistant to do, such as pulling the adventitia of blood vessels, but Zhang Fan didn't. He would rather pull with his left hand than give it to Lao Yan. It can almost be said that Zhang Fan would not let Lao Yan start until he had to.

Even if Lao Yan starts, Zhang Fan has to explain, "slow down, don't pull, just stay in this position." For many years, even experts in the capital and foreign countries have not instructed him in scald surgery.

"No one is perfect!" Think about Zhang Fan's superb technique, and then think about his overbearing character. Lao Yan was relieved, "master, who doesn't have a temper!"

Micro lymphatic suture, what does the lymphatic system do? This thing can not be described in detail. There are too many functions, and there are many functions that have not been studied and understood.

At present, lymph is mainly a channel. It is not like a blood vessel. Its channel is like a national defense highway. Although it also undertakes ordinary transportation, the most important thing is for defense and war.

For example, in case of tumor or foreign body invasion in a certain place, many factors in the body will arrive quickly through lymphatic channels all over the body.

This system is really like a military system. As long as it is slightly important, it has a node like a military station, which is the so-called lymph node.

Compared with blood vessels, lymphatic vessels are small and brittle. Micro lymphatic suture is very difficult. Many doctors can't suture perfectly. The only way is to sew this thing directly on a relatively large vein.

The unit of vascular suture is mm, while the unit of lymphatic suture is μm . The size can be solved. Now the microscope is also super powerful, but there is no way to control by hand. Such a small unit, the involuntary shaking of hands under the microscope is an earthquake, a super earthquake.

"Pliers. Monofilament nylon. Professor Yan, you withdraw your pliers. Leave the rest to me." Blood vessels can also be pulled by Lao Yan. Lymphatic Zhang Fan directly deprives Lao Yan of his rights.

"Well! OK." Lao Yan said helplessly. Zhang Fan is too stable. Often, Lao Yan is shaking a lot. He knew that his level could not meet Zhang Fan's requirements.

18 μm lymph node, let Zhang Fan play a flower. I can't tell it's stitching lymph nodes. As soon as the tip of the needle was picked, it passed through the lymphatic lumen very accurately. Four needles, lymphatic anastomosis. Open the hemostatic clip and the lymph will be unblocked immediately.

"What a gift!" Lao Yan looked through the microscope with empty hands. He was surprised and admired. It's really a long experience that surgery can do this.

Although the area of chest surgery is twice as large as that of facial surgery, the time is more than three hours less than that of facial surgery.

At the end of the chest, Zhang Fan said, "Lao Liu, what are the vital signs of the wounded."

Anesthesiologist Liu Yaowen immediately said: "steady, very steady, the body temperature began to drop slowly."

"OK. Prepare silica gel. Professor Li, what material is silica gel used? "

"Silicone, I brought it. The nurse has gone to get it. Do you have a rest? "

"Good!" Zhang Fan didn't talk nonsense. He went straight back to the original stool by the wall and closed his eyes to rest.

It's been too long. It's been 17 hours in a row. Zhang fan starts to feel really tired“ Give some sugar and salt water. Glucose alone doesn't seem to work. It's better to be warm. It's a little cold and

uncomfortable. " Zhang Fan said quietly.

"Good!" The itinerant nurses have changed two crops. Baoyin, an instrument nurse, can still insist. The big breasted girl who grew up eating meat has really good physical quality.

Lao Yan won't win directly. The old man is old. Surgery, once you're over 50, you can't refuse to be old. It's so cruel. The time window is too short.

"Change people, I won't win!" Lonely, incomparably lonely. After seeing Zhang Fan's operation, he knew what the peak was, but he couldn't reach it in his life.

The old man, bent with a sour and hard waist, can't straighten up if he wants to straighten up. If you want to have a little face out of the operation room, you can suck up your body.

"Give me a hand!" Professor Li Housen didn't eat much. He had no appetite. He didn't have any appetite at all " What do you think? "

Outside the operating room, Professor Li Housen held Professor Yan Dehua's arm and asked softly.

"It shouldn't be a problem. It's really powerful. You're going to find a way. But the boy has a bad temper and is very overbearing. Ha ha! " As if thinking of something, the old man, who had been lost, smiled. Smile is so happy.