

Diagnosis and Treatment of Deep Venous Thrombosis after Gynecologic Tumor Operation

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Abstract: To investigate the diagnosis and treatment of deep venous thrombosis (DVT) after gynecologic tumor surgery. Methods: Forty patients with venous tumors complicated with deep venous thrombosis from April 2013 to August 2013 were randomly divided into two groups, 20 in each group. The control group received intravenous infusion of salvia miltiorrhiza and glucose, and the experimental group received low molecular weight heparin anticoagulant therapy. Color Doppler flow imaging was used to detect blood flow velocity and thrombosis in the two groups. Results: The incidence of deep venous thrombosis in the experimental group was 0%, which was significantly lower than that in the control group ($P < 0.05$). The experimental group had longer TT and APTT than the control group, with faster blood flow and shorter limb circumference ($P < 0.05$). Conclusion: The use of low molecular weight heparin anticoagulant therapy in patients with gynecologic tumors can improve the blood flow and reduce the formation of deep vein thrombosis. It is worthy of popularization and application.

1. Introduction

Among the various complications of surgery, deep venous thrombosis (DVT) is a common type. According to reports, about 30% to 50% of patients have DVT after surgery, which is about 7% to 45% after gynecological diseases and malignant gynecologic tumors. Domestic clinical also found that the incidence of DVT in patients with gynecologic tumors mainly based on malignant tumor surgery has increased significantly in recent years. Therefore, clinical attention should be paid to the prevention and treatment of postoperative DVT complications in gynecologic tumors. Based on this, in order to explore the diagnosis, treatment and prevention strategies of deep venous thrombosis (DVT) after gynecologic tumor surgery, the clinical data of 40 patients with postoperative gynecologic tumors admitted to the hospital from April to August 2013 are analyzed.

2. Materials and methods

Forty patients with postoperative gynecologic tumors admitted to the hospital were randomly divided into the control group and the experimental group. The control group, aged 39-68 years, mean (52.8 ± 5.4) years old; body weight 49-82 kg, mean (61.8 ± 5.6) kg; 15 cases were malignant tumors (7 cases of endometrial cancer, 4 cases of ovarian cancer) 4 cases of malignant moles) and 5 cases of benign tumors. In the experimental group, the age ranged from 37 to 69 years, with an average of (53.4 ± 5.5) years; the body weight was 51 to 83 kg, with an average of (62.3 ± 6.2) kg; of these, 16 were malignant (8 endometrial cancer, 5 ovarian) Cancer, 3 cases of malignant moles, and 4 cases of benign tumors.

Control group. On the next day after surgery, 5% glucose injection 250 mL + Danshen Ligustrazine Injection 5 mL (National Medicine Standard: H52020959); 25 mL 5% glucose injection intravenously, 1 time/d, continuous treatment 1~2 weeks. test group. On the next day after surgery, low-molecular heparin calcium injection 4 100 IU/0.4 mL (national medicine standard size: J2009005) was used for subcutaneous injection once a day for 1 to 2 weeks. Both groups of patients underwent functional exercise of the lower limbs at the same time.

The skin temperature, color and circumference of the limbs were observed in both groups, and blood flow changes were monitored. Patients with DVT were detected by venography and color Doppler ultrasound. Two groups of anticoagulant factors Xa (anti-FXa) activity, clotting zymogen time (TT) and APTT were also measured before and after treatment. The data were analyzed by SPSS16.0 statistical software. The measurement data were expressed as mean \pm standard deviation ($\bar{x} \pm s$). The t test was performed between groups. The count data was expressed as (%) and the χ^2 test was performed.

3. Results

There were no deep venous thrombosis in the experimental group. Three patients (15%) in the control group developed deep venous thrombosis of the lower extremity. The incidence of deep venous thrombosis in the lower limbs was statistically significant ($P < 0.05$). There was no significant difference in anti-FXa activity between the two groups ($P > 0.05$). The TT and APTT in the experimental group were longer than the control group, the blood flow rate was faster, and the lower limb circumference was shorter. The difference was statistically significant ($P < 0.05$).).

4. Discussion

Many clinical studies confirmed that patients with gynecologic malignancies are at high risk of DVT complications, while DVT causes three changes in blood flow, venous wall damage and hypercoagulability. Clinically, DVT is often based on clinical manifestations, so it is difficult to diagnose. Even if the clinician is experienced, it is difficult to do so. Unexplained low fever, ipsilateral lower extremity pain and swelling are characteristic clinical manifestations of DVT, especially malignant tumors, obesity, and middle-aged and elderly patients with such symptoms should be highly suspected of DVT. Clinically assisted diagnosis methods include venography, radionuclide imaging, ^{125}I -labeled fibrinogen gamma camera imaging, and color Doppler ultrasonography. The diagnostic accuracy of color Doppler flow imaging is similar to that of venous angiography. The preferred screening method for stage venous occlusive disease. In this study, 3 patients in the control group developed deep venous thrombosis of the lower extremities, which were diagnosed by color Doppler flow imaging, and confirmed by clinical results, the accuracy rate was 100.0%, indicating that color Doppler ultrasound is the best choice for clinical diagnosis of deep venous thrombosis of lower extremity. Once the patient has a definite diagnosis of DVT, he or she should be hospitalized immediately for treatment, stay in bed and raise the affected limb. DVT treatments include anticoagulation, surgery, and thrombolysis. Among them, surgery and thrombolysis are currently used less, and anticoagulant therapy is the main purpose of preventing thrombotic progression and preventing chronic regurgitation or pulmonary artery. Embolization. The study found that the experimental group of patients with low molecular weight heparin treatment, the incidence of lower extremity deep venous thrombosis was 0%, significantly lower than the incidence of lower extremity deep venous thrombosis in the control group treated with Dan in glucose treatment 15%, and the experimental group The improvement of clinical indicators was better than that of the control group ($P < 0.05$), indicating that women with pelvic malignant tumors were affected by thrombosis and had a greater chance of complications after surgery, and the mortality rate was higher, so preoperative low molecular weight heparin prevention was given. Sexual treatment is beneficial to improve the venous return of lower extremities, reduce the incidence of complications such as phlebitis, and has a good preventive effect on the occurrence of deep vein thrombosis. This is also consistent with the report of Ma Yanqun. Prophylactic low molecular weight heparin anticoagulant therapy has attracted attention in recent years. Related studies have shown that low molecular weight heparin prophylactic anticoagulant therapy can significantly reduce postoperative DVT. In this study, only low-molecular heparin anticoagulant therapy was initially tested, with fewer cases and further experience. In addition, postoperative complications and mortality are elevated in women with pelvic malignancies due to thrombosis. Therefore, preventive treatment should be taken before and after surgery. Patients with malignant

tumors with high risk factors before surgery, especially the elderly, should wear elastic stockings, exercise lower limbs, and get out of bed early after surgery to increase the venous blood return rate of the lower extremities; try to avoid intravenous infusion of lower extremities to avoid phlebitis. Occurs.

With the continuous development of medical technology, surgery has become the main treatment for patients with gynecological tumors. Surgical removal of tumors has the effect of eliminating diseased roots, but at the same time it will bring complications to patients. Deep vein thrombosis is a common postoperative complication. It is caused by thrombus formation inside the venous lumen. It is mainly caused by swelling of the lower extremities, expansion of superficial veins, pain in the affected limbs, etc. In severe cases, pulmonary embolism and lower limb dysfunction may occur. It damages the physical and mental health of patients, affects the quality of life, and has a high disability rate and mortality rate. High risk factors for deep vein thrombosis. According to research and analysis, middle-aged and obese patients are high-risk patients with deep venous thrombosis. If the patient stays in hospital for a long time after surgery, it is easy to stay in bed for a long time, unable to move the lower limbs frequently, causing the lower limb muscles to be in a relaxed state, inhibiting blood flow in the lower limbs, resulting in slow blood flow and promoting thrombus formation; patients with malignant tumors are more benign tumor patients Easy to develop deep vein thrombosis, mainly due to the large scope of surgery for malignant tumors, easy to cause damage to the blood vessel wall and tissue, stimulate the initiation of the coagulation system, and promote thrombosis. During the operation, the resection of the malignant tumor causes a significant increase in platelet content, an increase in the number of coagulation factors, inhibits the activity of the anticoagulant factor, thereby causing the blood to be in a hypercoagulable state, and at the same time, the deteriorated tumor cells produce a large amount of blood coagulation activity. Enzyme, the two work together, easy to cause thrombosis. Causes of complicated deep vein thrombosis. There are three main reasons, namely, hypercoagulable state, slow blood flow, and damage to the vein wall. 1 blood hypercoagulable state: for patients with malignant tumors, the tumor tissue has cleavage products, which will increase the number of platelets and clotting factor, reduce the activity of anticoagulant factors, and cause the blood to be in a hypercoagulable state. At the same time, tumor cells can also express and secrete proteins associated with fibrinolysis inhibition, and thus easily form thrombus. In addition, the tumor itself has hemorrhagic necrosis, and it will also form many exogenous and endogenous thromboplastin to form thrombus. 2 slow blood flow: In this study, the majority of patients were obese and middle-aged, and also had diabetes, hypertension and venous thromboembolism, all of which were high risk factors for deep vein thrombosis. Because the patient needs enema, fasting, and lack of liquid supplement before surgery, the patient is prone to blood concentration and dehydration. In addition, the operation time is longer, the anesthesia lasts for a long time, causing the blood vessels to dilate, the blood flow is stagnant, there is blood loss during the operation, the blood is gradually concentrated, and the rest is mostly in bed rest, and the lower limb muscles are slack for a long time. There are many factors that can increase abdominal pressure after operation, such as abdominal distension, semi-sitting position, abdominal pain, abdominal pressure, and urinary retention. Under the influence of gravity, the blood of the lower limbs is greatly hindered during reflow, resulting in a decrease in blood flow velocity. Slow, forming a thrombus. Intravenous wall injury: There are many patients with malignant tumors in this group. Therefore, the scope of surgery is large. Especially after lymph node dissection, it is easy to cause damage to the blood vessel wall and surrounding supporting tissues, and the endogenous coagulation system is activated. Form a thrombus. Transvaginal surgery will compress the veins of the lower extremities, causing backflow to be blocked, which in turn damages the vein wall and forms a thrombus. It is unreliable to diagnose deep vein thrombosis by clinical manifestations, because if the patient does not have swelling of the lower extremities after the formation of pelvic thrombosis, it is easy to be misdiagnosed. In general, venography or intravenous color Doppler ultrasound is used, and MR and CT can also be used as a means of diagnosis. However, MR is more expensive and therefore difficult to promote. Most scholars believe that the comprehensive clinical manifestations, venous color Doppler ultrasound results and plasma D-dimer can confirm deep vein

thrombosis. In this study, ilium-femoral vein thrombosis was confirmed by color Doppler ultrasound, and the diagnosis rate was high. 3.4 Treatment of deep vein thrombosis. Gynecologic oncology is a period of time for the development of deep venous thrombosis, and deep vein thrombosis has a certain risk. If not treated properly, it can endanger the life of the patient. The diagnosis of deep vein thrombosis after gynecologic tumor surgery is sometimes difficult. Doctors usually judge the patient's clinical symptoms and sometimes make mistakes. Nowadays, assistive techniques such as venography and Doppler ultrasound are often used to help diagnose the complications. The prevention and treatment of complications of deep vein thrombosis has attracted the attention of many medical researchers as an important research. The hospital's research found that the prevention and treatment of patients by the use of rapid avoidance of subcutaneous injection and encourage patients to carry out appropriate activities. Therefore, in the future clinical diagnosis and treatment, we can take appropriate measures such as rapid avoidance or encourage patient activities for patients after gynecologic tumor surgery. Of course, this study also has certain shortcomings. There are only 50 patients in the two groups. The number of people participating in the experiment is not enough, and there may be some errors. And this experiment only considered postoperative prevention and treatment, and did not fully consider preoperative and intraoperative prevention and treatment.

5. Conclusion

Postoperative gynecologic tumor patients with low molecular weight heparin anticoagulant therapy can improve the blood flow of patients and reduce the formation of deep vein thrombosis, which is worthy of popularization and application.

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