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Thrombectomy Combined with Intravascular Angioplasty for the Treatment of Iliac Vein Compression Syndrome and Deep Vein Thrombosis

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ABSTRACT

To investigate the effect of thrombectomy combined with intravascular injection (PTA) on the treatment of iliac vein compression syndrome (IVCS) and deep vein thrombosis (DVT). 50 patients with IVCS and DVT were enrolled in this study from January 2013 to December 2016. They were randomly divided into two groups. The control group was treated with thrombolytic therapy. The study group was treated with thrombus aspiration combined with PTA. The therapeutic effect of the study group was significantly better than that of the control group ($P < 0.05$). Thrombectomy combined with intravascular stenting for the treatment of iliac vein compression syndrome and deep vein thrombosis is better than the second stage.

Introduction

Iliac vein compression syndrome (IVCS) refers to a variety of incentives caused by iliac vein compression, while patients with cavity adhesion problems, leading to venous return disorder, deep vein thrombosis (DVT) occurrence and development of important factors [1]. Patients with thrombosis after recanalization is more difficult, so in the process of removal of trunk thrombosis, the need to solve the problem of iliac vein occlusion or stenosis, and thus complete treatment of DVT. Our hospital in IVCS and DVT treatment process, the joint application of thrombosis and PTA treatment, are reported below.

1 Materials and methods

1.1 General information

Fifty patients with IVCS and DVT were enrolled in our hospital from January 2013 to December 2016. Among them, 31 males and 19 females, aged 31-69 years, mean 54.2 ± 2.6 years, and the symptoms were diagnosed as l -12d, with an average of 4.8 ± 0.6dd. All patients were diagnosed with clinical symptoms and imaging diagnosis. The general data of the two groups of patients were comparable ($P > 0.05$), all informed consent of the study, and approved by the hospital ethics committee.

1.2 Methods

In the control group, thrombolytic therapy was used in the treatment group. The treatment group was treated with thrombus aspiration combined with PTA. The surgical method was as follows: Thrombolytic therapy was performed through the contralateral femoral vein of the patient. The guide wire was inserted into the ipsilateral femoral vein. Under the conditions of the guide wire as a coordinate, anterograde femoral vein puncture, along the wire into the sheath to the thrombus position, the use of syringes to maintain negative pressure and suction, angiography showed no contrast agent after the end of treatment [2]. Intravascular cavitation treatment, the application of intravenous injection of 5ml of lidocaine hydrochloride, local anesthesia after puncture femoral vein, the application of inferior vena cava filter. Patients with age <60 should use a desirable filter. Application of catheter angiography to determine the location of the opening of the renal vein, analysis of the inferior vena cava for the presence of thrombosis and deformity, the filter placed in the side of the renal vein opening about 1.0 cm position. After the catheter angiography showed the patient's thrombosis clearance, to determine the patient's iliac vein stenosis as well as the location of the use of balloon dilatation venous stenosis position. Angiography to assess the effect of treatment, if the stenosis of more than 50% while the contrast agent flow rate is relatively slow, need to implant stent [3].

1.3 Observe indicators

Clinical efficacy judgments, recovery: after treatment, the patient's blood flow recovery is complete, contrast agent does not exist retention problems, and luminal residual stenosis less than 20%, the patient's signs and symptoms disappeared; markedly: after treatment, most patients with blood flow recovery , The contrast agent without significant retention problems, and the stenosis of the stenosis between 20% -70%, most of the clinical signs of patients and symptoms disappeared; effective: after treatment, part of the patient's blood flow recovery, while the contrast agent there is a slight retention problem, the stenosis of more than 70% of the stenosis, clinical signs and symptoms have improved; invalid: after treatment, the patient did not meet the above criteria, while the contrast agent retention significantly [4]. Effective rate = (cured + remarkably effective + effective) / patient total number of cases.

1.4 Statistical methods

The detection data were analyzed by SPSS 18.0, expressed by ($\bar{x} \pm s$), using t-test, $P < 0.05$ was statistically significant.

2 Results

In the two groups, the effective rate of the study group was significantly better than that of the control group ($P < 0.05$)

Table 1 Comparison of treatment outcomes in 2 groups of patients (cases,%)

Group	Cases	Cured	Remarkably effective	Effective	Ineffective	Effective rate
Control group	25	6 (24.0)	5 (20.0)	6 (24.0)	8 (32.0)	68.0
Study group	25	11 (44.0)	10 (40.0)	3 (12.0)	1 (4.0)	96.0
X^2	/	4.394	4.559	4.559	6.125	5.935
P	/	<0.05	<0.05	<0.05	<0.05	<0.05

3 Conclusion

IVCS combined with DVT patients with long-term vascular wall in the oppressive state and intravascular adhesions formed, causing lower extremity and pelvic

venous return disorder, but the physiological anatomy factor is not the only incentive for the development of IVCS. Other factors such as pregnancy, pelvic mass, pelvic hematoma and pelvic surgery are likely to lead to the emergence of the disease. IVCS can be said to be a variety of factors caused by venous compression syndrome, if the patient has a decline in blood flow and increased blood viscosity and other issues, more prone to DVT. IVCS patients with DVT in the treatment process, the need to clear the first time thrombosis, while actively treating the patient's primary disease, so as to improve the symptoms in a short time to maintain the speed of blood flow, as far as possible to maintain the function of the venous valve. Traditionally the disease treatment process, often choose the second phase of treatment, but easy because of iliac vein lesions exist collateral circulation, resulting in thrombolytic drugs can not be fully contacted with thrombus, clinical effect is not ideal. Surgical treatment of IVCS combined with DVT trauma, the patient's complications are more, but also to the prognosis of patients with adverse effects. In recent years, IVCS combined with DVT patients with percutaneous thrombosis treatment, combined with intravascular cavity treatment, compared with traditional treatment measures, more in line with the body's physiological and anatomical structure, on the one hand to improve blood patency, reduce the patient of the risk of complications, on the other hand can significantly reduce the patient's hospital stay [5]. The advantage of percutaneous thrombectomy is that the cost is low and the operation is simple. The disadvantage is that the thrombus is not thoroughly removed. It is not possible to effectively remove the large thrombus when using the sheath below 10F. Other measures need to be applied in combination. In view of this measure, this study improves the surgical balloon thrombectomy, the maximum application of interventional techniques such as balloon dilatation, stripping thrombosis and vascular intima, and then use the balloon to pull the thrombus to a concentrated position, sheath for suction, no surgical incision can effectively remove thrombosis.

In summary, thrombus aspiration combined with intravascular stenting for the treatment of iliac vein compression syndrome and deep vein thrombosis is better than the second phase of the formation.

References

[1] Zhang Jie, Shao Chuxiao. Iliac Vein Compression Syndrome Research Progress [J]. Chinese Journal of General Surgery, 2015,24 (6): 880-884.

[2] Ouyang Lin, Zhou Manzhen, Xu Siding, et al. Diagnosis and Treatment of Iliac Vein Compression Syndrome and Factors Affecting the Therapeutic Effect [J]. Chinese Journal of Interventional Imaging and Therapy, 2016,13 (7): 406-410.

[3] Zhao Bo. Combined Surgical Treatment of Left Iliac Vein Compression Syndrome Secondary to the Left Lower Limb Acute Deep Vein Thrombosis [J]. China Health Standards Management, 2016 (2): 20-21.

[4] Guo Hongqi, Li Jun, Zhang Peng, et al. Endovascular Treatment of Iliac Vein Compression Syndrome in 49 Cases [J]. Guangdong Medical College, 2015,33 (4): 466-468.

[5] Yu Feng, Li Xiao Qiang. Iliac Vein Compression Syndrome in the Treatment of Secondary Stent and Contralateral Thrombosis [J]. Chinese Journal of General Surgery, 2016,31 (11): 967-968.