

A Case of Spinal Cord Injury After Aortic Dissection Aneurysm Rupture Treated by Warm Acupuncture and Traditional Chinese Medicine

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Abstract: Spinal cord injury caused by aortic dissection aneurysm rupture is one of the common complications after aortic dissection rupture. This patient developed paraplegia due to gas and blood injury, stasis of arteries and arteries obstruction after aortic dissection aneurysm rupture. In order to treat the disease, the tutor from warm Yang tong Du, qi invigorate blood, kidney fill essence legislation, to the pathogenesis of the key as the breakthrough point, mainly with acupuncture, with traditional Chinese medicine treatment, in order to make qi and blood smooth operation, the essence of each other, promote the spinal cord and du repair. After half a year of treatment, the patient's lower limb motor and sensory functions returned to normal, and the bowel and urine functions returned to normal. The patient's daily life was significantly improved.

Spinal cord injury caused by aortic dissection aneurysm rupture is one of the common complications after aortic dissection rupture^[1]. The main clinical manifestations were limb motor sensory dysfunction, bladder and rectal dysfunction. At present, it is considered that the main causes may be related to the embolism of cardiopulmonary bypass, low perfusion, spinal cord ischemia and hypoxia, post-ischemic reperfusion injury and systemic inflammatory response caused by cardiopulmonary bypass^{[2][3]}. At present, there are few reports on the treatment of the disease with acupuncture and moxibustion of traditional Chinese medicine. The author followed her mentor Professor He Xingwei to cure 1 case of the disease mainly with warm acupuncture and moxibustion combined with traditional Chinese medicine, which is reported as follows.

Keywords: After Aortic Dissection Aneurysm Rupture; Spinal Cord Injury; Warm Acupuncture; Traditional Chinese Medicine

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1. The medical record

Patient, Moumou Li, female, 45 years old, office worker. On October 19, 2020, the patient suddenly had severe chest and back pain without obvious inducement, and was sent to a hospital in Nanchang for emergency treatment. Thoracic and abdominal CTA examination showed that aortic dissection aneurysm was ruptured, so "total aortic arch artificial vascular replacement combined with stent elephantia surgery combined with partial ascending aorta resection combined with artificial vascular replacement + aortic valvuloplasty" was performed under general anesthesia and cardiopulmonary bypass. After the operation, there were symptoms such as unstable blood pressure, arrhythmia, chest pain and chest tightness, accompanied by paralysis of both lower limbs, loss of pain, temperature and touch below the xiphoid plane, and dysfunction of bladder

and rectum. After symptomatic support treatment such as analgesia, hypotension and heart rate control, the hospital left the hospital after stable vital signs. The patient was admitted to the fourth department of acupuncture and moxibustion in our hospital on 2020-11-03 for acupuncture rehabilitation. Physical examination: the face and limbs are slightly swollen, the neck is slightly stiff, and about 10cm surgical wound can be seen at the sternum. The muscle strength of both lower limbs was level 1+, the big toe of both feet could be slightly flexed and extended, and the muscle bundles of both lower limbs vibrated occasionally. Pain, touch, temperature and position sensation decreased significantly below the chest 7 plane. The knee tendon and Achilles tendon reflexes were significantly weakened without pathological signs.

Diagnosis: Western medicine diagnosis: ① spinal cord injury; ② hypoproteinemia; ③ Aortic dissection rupture (after implantation); ④ Neurogenic bladder; ⑤ Neurogenic intestine; ⑥ Hypertension grade 3. TCM diagnosis: ① flaccidity (kidney qi deficiency, blood stasis syndrome); ② Difficulty in urination ; ③ Constipation; ④ The wind is dizzy.

Treatment: Warm Yang tong Du, qi huoxue, kidney fill essence.

Acupuncture acupoint selection: main acupoint: supine acupoint selection: Tianshu, Zhongwan, Jianli, Guiguai, DaJu, Shuidao, Qihai, Guan Yuan, Zhongji, Qihai, Liangqiu, Fengshi, Yinling quan, Yangling quan, Zusanli, Fenglong, Zulinqi, Taichong, Zhigou, Houxi, Shenmen, Danzhong. Lateral decubitus point selection: Jiaji point (chest 5-waist 5), Zhiyang, Shenshu, Dachang Shu, Yaoyangguan, Mingmen, Zhibian, Huiyang, Huantiao, Weizhong. (Except the abdominal and Du meridian points, all the other points were bilateral.)

Method of operation: Patients were taken supine position and lateral position acupuncture treatment. The acupoint skin was disinfected with 75% alcohol and needled with a 1.5-inch millimeter needle. The acupuncture angle and depth of various points are acupuncture according to the “meridian and acupoint science” in the textbook of the 12th Five Year Plan. In Zusanli, Qihai and Guanyuan, the method of lifting and inserting was adopted, and in Shenshu, the method of twisting and turning was adopted, and the needle at each point was about 1 minute. The rest of the acupoints are flat reinforcing flat purging technique, medium stimulation. Each time and each group of acupoints were kept for 30 minutes, once a day. The acupoints in supine position were first acupuncture and moxibustion. After treatment, the acupoints in lateral decubitus position were taken for acupuncture and moxibustion. In each position, AI Tiao warm acupuncture was applied immediately after the needle was inserted in the abdomen, Guanyuan, Qihai, Zusanli, or in the back, waist Yangguan, Mingmen, Zhiyang, etc. During warm moxibustion with moxa sticks (moxa sticks are fixed on moxa sticks suspension frame or operated manually, moxa sticks must be close to the needle handle or facing the acupoints, and the heat shall be subject to local flushing and the patient can tolerate), the ash of moxa sticks shall be removed every 3 ~ 5 minutes to prevent the ash from falling off and scalding the patient's skin. For each position, moxibustion was applied for 30 minutes, once a day.

Traditional Chinese medicine decoction: Prepared Astragalus membranaceus 20g, Angelica angelica 10g, Ligusticum chuanqi 10g, cooked ground 10g, fried Radix paeoniae alba 10g, Radix reed 15g, Lu Xiangcao 10g, Plantain plantain 10g, Codonopsis pilosula 15g, Poria cocos 15g, fried Atractylodes atractylodes alba 15g, Euphorbia officinalis 10g, Herba epimedii 10g, Cornus officinalis 15g, prepared glycyrrhiza glycyrrhiza 5g, Parsnip 10g, schisandra chinensis 10g, Cistanche 10g, tortoise board 10g. Take it in water, one dose a day, and warm it twice in the morning and evening (after taking it for 1 month, the patient refused to continue taking it because of fear of bitter medicine).

Due to the previous history of hypertension for 4 years, during the treatment period, nifedipine controlled-release tablets were used to control blood pressure, metoprolol succinate to control heart rate, Mecobalamin tablets to nourish nerves, and limb rehabilitation training was used to promote recovery.

2.Course of treatment: 6 times / week, 4 weeks as a course of treatment.

Treatment results: After 2 weeks of treatment, the proximal muscle strength of both lower limbs was grade 3, the distal muscle strength was grade 3, the muscle tension was low, and the sense of pain and temperature decreased. Urination can be solved by itself, but the control force is poor; After 4 weeks, the muscle strength of the left lower limb was 3 +, and the muscle strength of the right lower limb was grade 3. The pain and temperature of both lower limbs decreased. You can help stand. Urinate once every 2-4 hours. Occasionally, you have poor control when you are nervous and constipation; After 8 weeks, the left lower limb muscle strength was 4 + and the right lower limb muscle strength was 4. The pain and temperature

sensation of both lower limbs were improved, and the knee and ankle reflexes of both lower limbs were weakened. Urinate once every 3-4 hours, urinate clear and long, can endure for 3-5 minutes, stool control is fair, occasionally constipation, need to open plug dew to help discharge. After 12 weeks, the left lower limb muscle strength was grade 5 and the right lower limb muscle strength was grade 4 +, the pain and temperature sensation of both lower limbs were improved, and the knee and ankle reflexes of both lower limbs were weakened. The function of defecation and defecation is almost normal, with occasional dry defecation.

After half a year of treatment, the patient's lower limb motor and sensory functions were nearly normal. The muscle strength of the left lower limb was grade 5, and the muscle strength of the right lower limb was grade 5 -. The pain and temperature sensation of both lower limbs were close to normal. The defecation function returned to normal.

3. Comments

Aortic dissection aneurysm is caused by aortic intima tear, which enters the aortic middle membrane through the intima rupture opening and forms a dissection hematoma, which extends along the aortic wall to the surrounding area and causes severe acute and critical cardiovascular disease in both true and false cavities, also known as aortic dissection or aortic separation or aortic dissection hematoma^{[4][5]}. Aortic dissection rupture is often life-threatening. At present, surgical treatment is the most direct and important effective treatment, but it is often accompanied by complications such as spinal cord injury.

Paraplegia caused by spinal cord injury belongs to the category of "impotence disease" in traditional Chinese medicine. Its onset is due to exogenous warm poison, damp heat evil, internal emotional injury, diet injury, congenital deficiency, improper sexual intercourse, trauma and exposure to poisons, resulting in the loss of Qi, blood and semen in the five internal organs, resulting in the loss of maintenance of muscles, muscles and veins, which is called flaccid syndrome^[6]. The patient suffered from the injury of Qi and blood and obstruction of due to the superintendent tract the operation of aortic dissection aneurysm. On the one hand, the movement of Yang Qi in the governor's pulse is blocked, the meridians are blocked, the Yang Qi cannot go down, and the meridians and veins are out of nourishment, which can lead to adverse activities of both lower limbs; At the same time, the operation of the brain marrow divine machine needs the nourishment and transportation of the essence of Yang qi. When Yang qi is deficient, the essence is insufficient, and the vein is blocked, it will lead to the abnormal operation of the brain marrow divine machine. The brain marrow divine machine can not freely control the limb motor sensory function, and the limb motor sensory function can also be abnormal. In addition, the dysfunction of Yang Qi in the governor's pulse and the abnormal operation of the divine machine in the brain can lead to the loss of bladder gasification, the abnormal transportation of bladder water and fluid, and then accompanied by diseases and syndromes such as amenorrhea and urinary incontinence. On the other hand, the obstruction of the operation of the governor vessel can lead to the abnormal distribution of the essence of Qi and blood, the homology of Qi and blood, the biochemical operation of the essence of Qi and blood, and the inability to nourish the meridians and veins, which is also an important factor in the occurrence of impotence.

In view of the key pathogenesis of this disease, when from the warm Yang tong Du, yiqi huoxue, kidney fill essence legislation, to make qi and blood smooth operation, the essence of each other, and promote the repair of spinal cord and governor vessel. Therefore, the tutor pays attention to warm acupuncture combined with traditional Chinese medicine in the treatment of this disease. On the one hand, it can nourish the meridians and veins by Tonifying the essence of Qi and blood; By dredging the governor vessel and warming Yang Qi, it can not only nourish the meridians and veins, but also promote the normalization of the operation of the brain marrow divine machine, so as to restore the motor and sensory functions of the limbs dominated by the brain marrow divine machine, as well as the functions of bladder and rectum. Consequently, selecting Jiaji point near the governor vessel can dredge the local Qi and blood of the governor vessel; Taking Shenshu, Yaoyangguan, Mingmen, Zhiyang, Shenshu, Zhibian, Huiyang and Weizhong points to dredge the governor's pulse, tonify the kidney and fill the lean marrow, so as to normalize the metaplasia and operation of the essence of Qi, blood and body fluid, and then replenish the governor's pulse, which is conducive to the recovery of impotence syndrome^{[7][8]}. Following the principle of "treating impotence only takes the channel of Yangming", it takes Danzhong, Jianli, Zhongwan, Guanyuan, Zhongji, Qihai, Tianshu, Huilai, Liangqiu, Zusanli, Fenglong, Sanyinjiao, Xuehai and other points to replenish the essence of Qi and blood and dredge meridians. Select Yinling quan, Yangling quan, Huantiao, Taichong, zulinqi, Fengshi and other acupoints near to

dredge the vein. Moxa stick warm needle moxibustion is added at Yaoyangguan, Zusanli, Qihai and other points to replenish qi and Yang, dredge meridians, promote the operation of Yang, restore the normal operation of divine machine, and realize the recovery of motor sensory function of both lower limbs and bladder and rectum function. Traditional Chinese medicine selects drugs with the effects of Yi Qi Wen Yang, dredging veins, tonifying kidney and essence, diuresis and so on, so as to promote the repair of spinal cord.

This medical record is based on the legislation of Warming Yang and dredging governor, supplementing qi and activating blood, tonifying kidney and filling essence. It is treated with Warming Acupuncture and moxibustion combined with traditional Chinese medicine to warm yang, dredge governor vessels, replenish the essence of Qi and blood, and promote the normal operation of brain marrow divine machine, so that the brain marrow divine machine can regulate limb motor sensation, bladder, rectum and other functions can also return to normal.

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Conflict of Interests

The author(s) declare(s) that there is no conflict of interest regarding the publication of this paper.

Reference

- [1] Cheng, D., Martin, J., Shennib, H., et al. (2010). Endovascular aortic repair versus open surgical repair for descending thoracic aortic disease: A systematic review and meta-analysis of comparative studies. *Journal of the American College of Cardiology*, 55(10), 986–1001.
- [2] Hiraoka, T., Komiya, T., Tsuneyoshi, H., et al. (2018). Risk factors for spinal cord ischaemia after thoracic endovascular aortic repair. *Interactive Cardiovascular and Thoracic Surgery*, 27(1), 54–59.
- [3] Baehner, T., Boehm, O., Probst, C., et al. (2012). Cardiopulmonary bypass in cardiac surgery. *Anaesthesist*, 61(10), 846–856.
- [4] Yang, X. H. (2017). Effect of high-quality nursing on bad mood and nursing satisfaction after aortic dissection. *Journal of North Sichuan Medical College*, 32(4), 619–621.
- [5] Qiao, J., & Zhao, C. (2020). Effect of precision nursing on patients with aortic dissection aneurysm during perioperative period. *Chinese Journal of Modern Nursing*, 26(7), 941–944.
- [6] Wu, M. H., & Wang, X. Y. (2012). *Internal medicine of traditional Chinese medicine*. Beijing: China Traditional Chinese Medicine Press.
- [7] He, X. W. (2008). Discussion on the regulation of brain marrow Shenji on life activities. *Chinese Journal of Basic Medicine of Traditional Chinese Medicine*, 14(3), 170–171.
- [8] He, X. W., & Huang, J. H. (2008). Discussion on the treatment of flaccidity syndrome from governor vessel. *China Acupuncture and Moxibustion*, 28(3), 231–233.