

HOSTED BY



ELSEVIER

Contents lists available at ScienceDirect

Chinese Journal of Traumatology

journal homepage: <http://www.elsevier.com/locate/CJTEE>

Case report

Perioperative treatment of femoral neck fracture with deep venous thrombosis: A case report

Ming Liu, Lei Liu, Fuguo Huang, Yue Fang, Gang Zhong, Zhou Xiang*

Department of Orthopaedics, West China Hospital of Sichuan University, Chengdu 610041, China

ARTICLE INFO

Article history:

Received 17 April 2014

Received in revised form

9 July 2014

Accepted 10 September 2014

Available online 17 July 2015

Keywords:

Femoral neck fractures

Calf muscular venous thrombosis

Venous thrombosis

ABSTRACT

Deep venous thrombosis (DVT) is an important cause of disability and mortality after major orthopedic surgery. The roles of perioperative treatment and prevention of DVT in patients with femoral neck fractures who require major surgery have not yet been well explored in Chinese clinical practice. Here we report a case of calf muscular venous thrombosis in a 55-year-old woman with femoral neck fracture before surgery. Preventive and treatment measures including the administration of heparin sodium, application of venous foot pump and placement of inferior vena cava filter were taken. The condition of the patient was stable during the perioperative period and the surgery was successful. Besides, postoperative examination showed that the femur healed well and the functional recovery was satisfactory. Our results suggest that femoral neck fracture patients combined with DVT can receive surgery after accurate preoperative assessment and proper preoperative treatment.

© 2015 Production and hosting by Elsevier B.V. on behalf of Daping Hospital and the Research Institute of Surgery of the Third Military Medical University. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Deep venous thrombosis (DVT) is common after major orthopedic surgery and can cause high morbidity once pulmonary embolism occurs. So the prevention and treatment of DVT is extremely important. Calf muscular venous thrombosis is one kind of DVT, which may progress into popliteal and iliac venous thrombosis with the prolonged bed rest and performance of operation. We treated a case of femoral neck fracture associated with DVT and shared the experience in the following.

2. Case report

A 55-year-old woman (body weight 55 kg, height 156 cm) admitted to our hospital due to pain and limited motion of the left hip joint two days after falling down. The patient had no history of smoking or alcohol abuse. However, she had a history of 10-year constipation. Besides she developed acute pancreatitis 19 years ago but fully recovered after conservative treatment. She had no risk factors of malignant tumor, venous disease of the lower extremity, diabetes, nephrotic syndrome or blood diseases. After admission, X-ray revealed a left femoral neck fracture (Fig. 1); color Doppler ultrasound of the abdomen and lower extremity showed calf muscular venous thrombosis at the left leg. The coagulation parameters were prothrombin time 12.9 s, activated partial thromboplastin time 26.2 s, international normalized ratio 1.15, plasma fibrinogen 3.01 g/L, platelet count 103×10^9 g/L, and D-dimer 3.5 mg/L.

* Corresponding author. Tel.: +86 28 85422530.

E-mail address: xiangzhou15@hotmail.com (Z. Xiang).

Peer review under responsibility of Daping Hospital and the Research Institute of Surgery of the Third Military Medical University.

Careful preoperative orthopedic examination was carried out after the admission of the patient. On the first day of admission, preventative measures of DVT were taken, including elevation of the injured limb and enhanced ankle joint motion as well as quadriceps femoris contraction. Besides, glycerin enema and fructus cannabidis bolus were administrated to promote defecation. Compression stockings were put on as a measure of physical prevention.¹

On the second day of admission, routine color Doppler ultrasonography indicated left calf muscular venous thrombosis. According to the risk grading of DVT, fraxiparine (0.4 ml, qd) was prescribed immediately for anticoagulation therapy till one day before surgery. Preoperative assessment showed that the patient was at a moderate risk of pulmonary embolism. On the fourth day of admission, closed reduction and hollow screw internal fixation of the left femoral neck were conducted after general anesthesia with the assistance of X-ray navigation. The operation was gently performed to avoid compression to the involved limb. Moreover the operation time and anesthesia duration were minimized. The operation lasted for only 1 hour and 15 minutes.

Six hours after operation, fraxiparine (0.4 ml, ih qd) was applied to avoid coagulation. On the third day after operation, the left lower limb developed asymmetrical swelling. Repeat color Doppler ultrasonography indicated thrombosis formation in the left common

femoral vein, superficial femoral vein, popliteal vein and posterior tibial vein. Elevation and immobilization of the left lower limb combined with administration of fraxiparine (0.4 ml, ih q 12 h), warfarin (2.5 mg, po qd) and sodium ozagrel (80 mg, ivgtt qd)² were applied. Besides, the coagulation function was regularly checked and the dose of warfarin was adjusted according to the international normalized ratio.^{3–5}

On the 11th day after surgery, the edema of the left lower limb was alleviated, nevertheless, color Doppler ultrasonography indicated that thrombosis has ascended to the left common iliac vein and external iliac vein. Considering the elevation of the thrombosis level, a filter was placed in the inferior vena cava the same day (Fig. 2).^{6–9} The anticoagulation therapy continued. Ambulation was encouraged and reexamination by regular color Doppler ultrasonography showed the edema of the lower limb gradually diminished.

On the 25th day after surgery (14th day after filter placement), angiography found thrombosis at the filter. After assessment and communication with the patient and her family, we decided to retain the filter and advised the patient a lifetime oral drop of warfarin with a dose adjustment based on the follow-up results.¹⁰

X-rays at six months and one year after operation revealed that the fracture healed well (Fig. 3). At one year time, function of the lower limb has fully recovered (Fig. 4).



Fig. 1. Preoperative X-ray showed Garden type III femoral neck fracture and calf muscular venous thrombosis on the left leg.

Download English Version:

<https://daneshyari.com/en/article/3107389>

Download Persian Version:

<https://daneshyari.com/article/3107389>

[Daneshyari.com](https://daneshyari.com)