Case report on diagnosis and management of deep venous thrombosis in collaboration with interventional procedure

Vaishali Tembhare[1*]

[1] Clinical Instructor, Department of Medical Surgical Nursing, Faculty of Nursing, Smt. Radhikabai Meghe Memorial College of Nursing, Sawangi (Meghe), Wardha, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha, Maharashtra, India

Correspondence Author: Vaishali Tembhare

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Abstract

Deep vein thrombosis is a blood clot that originates in a vein deep within the body. Deep venous thrombosis of the lower limbs is a frequent, age-related condition characterised by localised intravascular coagulation. A male patient of 30 years admitted to surgery ward no 14 AVBRH on 23rd January 2022 with the chief complaint of pain in calf muscle, swelling on left limb, discomfort and tenderness, skin redness itchiness. After performing physical examination, history collection colour Doppler and peripheral venography he was diagnosed as deep vein thrombosis. Client was referred to interventional radiologist for the peripheral veinoplasty and IVC filter placement both the procedure was done 06/02/2022 and the client was discharged after 7 days.

Keywords: deep vein thrombosis, intravascular coagulation, peripheral venography, veinoplasty

Introduction

Thrombosis is the creation of an obstructive clot as a result of a procoagulant imbalance Arterial and venous thrombosis are the two most common kinds of thrombosis [1].

Venous thromboembolism (VTE) is a condition in which blood clots in the veins. Thrombosis is divided into two types: deep vein thrombosis (DVT) and pulmonary embolism (PE). Deep vein thrombosis is a blood clot that originates in a vein deep within the body. Deep venous thrombosis of the lower limbs is a frequent, age-related condition characterised by localised intravascular coagulation. The mechanism is unknown, clinical detection is difficult, recurrence is prevalent, and mortality is unpredictable [2].

Patient identification

A male patient of 30years admitted to surgery ward no 14 AVBRH on 23rd January 2022 with the chief complaint of pain in calf muscle, swelling on left limb. He is 58 kg and his height is 145cm. After performing physical examination, history collection colour Doppler and peripheral venography he was diagnosed as deep vein thrombosis. Client was referred to interventional radiologist for the peripheral venoplasty and IVC filter placement both the procedure was done 06/02/2022 and the client was discharged after 7 days.

Present medical history

AVBRH was visited by a 30-year-old male patient with the complaint leg discomfort and tenderness, and skin redness and also strike without warning, swelling\itchiness, skin that is heated to the touch and is in agony or cramping and he was approved to surgery ward no 14. He is an assumed case of Deep vein thrombosis.

Family history

There are four members in the family. My patient was diagnosed to Deep vein thrombosis major and his parents were diagnosed to be carrier of Deep vein thrombosis. Type of marriage of the parents is non – consanguineous marriage. All other members of the family were not having complaints in their health except for my patient who was being admitted in the hospital.

Clinical findings

Cellulitis, arthritis, vascular occlusion, lymphedema, rupture of Baker cyst, and other conditions can all cause a bloated, painful lower extremity. Muscular fracture, varicose vessels, superficial thrombophlebitis, and chronic thrombophlebitis are some of the conditions that can occur.

Etiology

A hereditary (genetic) disorder that makes blood clots more likely. Due to injury, surgery, or immobility, blood flow in a deep vein is restricted. The first six weeks after birth and throughout pregnancy, over 0 years old (although a DVT can affect people of any age), obesity, hormone treatment or using birth control tablets. Lengthy periods of inactivity, such as sitting for long duration of moment in a car, truck, bus, train, or aeroplane, reduce blood flow. After surgery or a catastrophic injury, you may be immobile [3].

Physical examination

In DVT, the temperature, blood pressure, heart rate, and respiration rate may all be normal. Cardiogenic shock is indicated by a drop in blood pressure below baseline (associated with tachycardia and end organ hypo perfusion)

atrial fibrillation (26 percent) tachypnoea is a condition in which a person experiences difficulty breathing (70 percent) fever of low in intensity Measuring both legs' sizes at the exact location [4].

Diagnostic assessment

There are additional illnesses that have the same signs and symptoms as DVT. Damage to the muscles, cellulitis, and inflammation of the veins beneath the skin are all possible complications; for example, they can all resemble the signs and symptoms. To diagnose DVT, specific tests that check for lumps in the veins or the lungs are needed.

- **Phlebography-** For research investigations to rule out and identify proximal DVT and calf vein thrombosis, phlebography is the gold standard [5].
- **CUS-**Compared to phlebography, compression ultrasonography (CUS) provides a number of advantages [6].

Discussion

A male patient of age 30 years old admitted in AVBRH on surgery ward with the chief complaint of heat, discomfort or tenderness, and skin redness and also strike with struckning, swelling\itchiness, agonising, or cramping pain skin that is warm to the touch. He was diagnosed as deep vein thrombosis major Investigations began the moment he was admitted to the hospital and appropriate treatment were started. He shows great improvement and the treatment was still going on till my last date of care. "A clinico-epidemiological investigation of Deep vein thrombosis patients in India" was the subject of one of the studies. It was carried out to evaluate the clinical presentation and management techniques in the area. This athlete with haemoglobin SC had a number of Symptoms of sickle cell disease that have been documented in the literature Acute chest syndrome, DVT, and DVT are all terms used to describe the same thing chronic renal disease with avascular necrosis of the hip [7].

The importance of the environment in the development of venous thrombosis, especially during pregnancy and puerperium, has been known for ages. It was often thought that thrombosis in puerperium, sometimes known as 'milk leg,' was caused by milk collecting in the leg [8].

Environmental causes of deep vein thrombosis

Age

The most important risk factor for venous thrombosis is age, which has a steep risk gradient in which the incidence is 1000-fold higher in the elderly than in the young (18,21,22,33). It's not understood why age has such a big role in venous thrombosis [9].

Pregnancy and puerperium

Thrombosis in young people is uncommon, as is thrombosis after pregnancy and puerperium. Despite its rarity, pregnancy is responsible for roughly half of all venous thrombotic events in women of reproductive age [10].

Lifestyle

Curvature of the popliteal veins appears to confer a larger risk of immobilisation in a sitting posture than in other positions, which is likely connected to increased blood flow obstructions [11].

Surgery and trauma

Has a particularly significant risk of venous thrombosis, with over 50% of patients experiencing thrombosis in the absence of antithrombotic prophylaxis for specific procedures [12].

Conclusion

Venous thromboembolism refers to blood clots in the veins (VTE). The two types of thrombosis are deep vein thrombosis (DVT) and pulmonary embolism (PE). deep venous thrombosis (DVT) is known for causing pain and oedema in the legs; however, symptoms can be present or absent, unilateral or bilateral, minor or severe, depending on the patient. The Centers for Disease Control and Prevention (CDC) claims that (CDC), 10-30% of persons with DVT is characterised by localised intravascular coagulation. Veinoplasty is helpfull in opening the blocked vein. IVC filter avoid the traveling of the blood clot in circulation.

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