

Research Article

Deep Vein Thrombosis and It's Homoeopathic Approach

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Abstract Deep vein thrombosis (DVT) is a disease of a venous system which helps to formation of thrombus in the vein and effects the individual life. The aim of this article to highlight the risk factor, patho-physiology, recent diagnostic tool of DVT along with complication, general management and its Homoeopathic approach that is, how homoeopathy deals such kind of cases with its holistic and individualistic way.

Keywords *DVT; Well's score; Homoeopathy; Case-taking; Individualization; Miasm*

Introduction

The book 'SUSHRUTA SAMHITA' published around 600-900 BC, as the first description of Deep vein thrombosis (DVT). In 1271, DVT symptoms in the leg of a 20 years old male have been found, & it was the first case of DVT (French manuscript).

Deep vein thrombosis (DVT) occurs when a blood clot (thrombus) forms in one or more of the deep veins in your body, usually in your legs. Deep vein thrombosis can cause leg pain or swelling, but may occur without any symptoms. Deep vein thrombosis can develop if you have certain medical conditions that affect how your blood clots. Deep vein thrombosis can also happen if you don't move for a long time, such as after surgery, following an accident, or when you are confined to a hospital or nursing home bed. Deep vein thrombosis is a serious condition because blood clots in your veins can break loose, travel through your bloodstream and lodge in your lungs, blocking blood flow (pulmonary embolism).

The symptomatic DVT is just like 'Tip of Ice-berg'. More than 1 million cases are found in India. About 1.5 out of 1000 adults a year have a first VTE in high income countries. It is very rare in children, about 60% occurs in above 60 years. Males are 18% higher incidence rate than female. DVT occurs in upper extremity is only 4-10% cases. It is less common in blood group 'O'.

Deep Vein Thrombosis

Deep vein thrombosis is the formation of a blood clot in one of the deep vein of the body, usually occurs in lower extremity, thigh etc. It causes decreases blood flow rate, formation of clot with changes in blood vessel

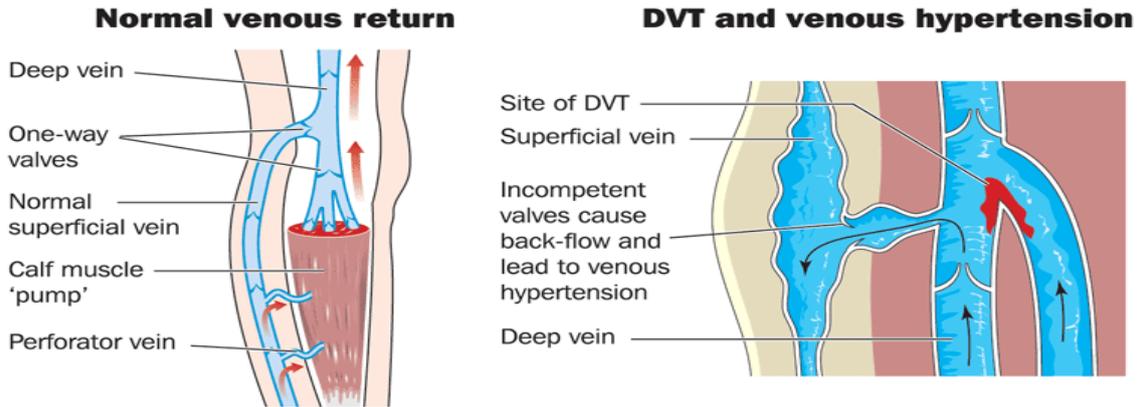


Figure: Venous return

Patho-Physiology

Reduced blood flow

Venous stasis occurs when blood flow is reduced, when veins are dilated, & skeletal muscle contraction is reduced



Damage

Damage to the intimal lining of blood vessels creates a site for clot formation



Phlebitis

Formation of a thrombus accompanies phlebitis i.e. inflammation of vein walls



Platelet aggregates

Venous thrombi are aggregates of platelets attached to the vein wall that have a tail like appendage containing fibrin, WBC, RBC



Tail

The tail can grow or can propagate in the direction of the blood flow as successive layer of the thrombus form

Mainly thrombus formation depends on 3 criteria, which is known as **VIRCHOWS TRIAD**

- 1) **Endothelial injury**
- 2) **Hypercoagulability**
- 3) **Stasis**

Risk Factor

Many factors can increase your risk of developing deep vein thrombosis (DVT), and the more you have, the greater your risk. Risk factors for DVT include:

- a) **Inheriting a blood-clotting disorder.** Some people inherit a disorder that makes their blood clot more easily. This inherited condition may not cause problems unless combined with one or more other risk factors.
- b) **Prolonged bed rest, such as during a long hospital stay, or paralysis.** When your legs remain still for long periods, your calf muscles don't contract to help blood circulate, which can increase the risk of blood clots.
- c) **Injury or surgery.** Injury to your veins or surgery can increase the risk of blood clots.
- d) **Pregnancy.** Pregnancy increases the pressure in the veins in your pelvis and legs. Women with an inherited clotting disorder are especially at risk. The risk of blood clots from pregnancy can continue for up to six weeks after you have your baby.
- e) **Birth control pills or hormone replacement therapy.** Birth control pills (oral contraceptives) and hormone replacement therapy both can increase your blood's ability to clot.
- f) **Being overweight or obese.** Being overweight increases the pressure in the veins in your pelvis and legs.
- g) **Smoking.** Smoking affects blood clotting and circulation, which can increase your risk of DVT.
- h) **Cancer.** Some forms of cancer increase the amount of substances in your blood that cause your blood to clot. Some forms of cancer treatment also increase the risk of blood clots.
- i) **Heart failure.** People with heart failure have a greater risk of DVT and pulmonary embolism. Because people with heart failure already have limited heart and lung function, the symptoms caused by even a small pulmonary embolism are more noticeable.
- j) **Inflammatory bowel disease.** Bowel diseases, such as Crohn's disease or ulcerative colitis, increase the risk of DVT.
- k) **A personal or family history of deep vein thrombosis or pulmonary embolism (PE).** If you or someone in your family has had DVT or PE before, you're more likely to develop DVT.
- l) **Age.** Being over age 60 increases your risk of DVT, though it can occur at any age.
- m) **Sitting for long periods of time, such as when driving or flying.** When your legs remain still for many hours, your calf muscles don't contract, which normally helps blood circulate. Blood clots can form in the calves of your legs if your calf muscles aren't moving for long periods.

Causes

Deep vein thrombosis occurs when a blood clot forms in the veins that are deep in your body, often in your legs. Blood clots can be caused by anything that prevents your blood from circulating normally or clotting properly

Mnemonic: **THROMBOSIS**

- a) **T**: Trauma
- b) **H**: Hormones like OCP
- c) **R**: Road traffic accident
- d) **O**: Operation like cholecystectomy
- e) **M**: Malignancy
- f) **B**: Blood disorder like polycythemia
- g) **O**: Obesity, old age
- h) **S**: Serious illness
- i) **I**: Immobilization
- j) **S**: Splenectomy

Clinical Feature

Deep vein thrombosis signs and symptoms can include:

Symptoms:

- a) Swelling in the affected leg. Rarely, there may be swelling in both legs.
- b) Pain in your leg. The pain often starts in your calf and can feel like cramping or a soreness.
- c) Oedema: Due to obstruction
- d) Temperature raised
- e) Phlegmasia cerulea dolens: Entire extremities a massively swollen, tense, painful & cool to touch
- f) Sudden fainting with rapid pulse
- g) Shortness of breath in some cases due to pulmonary embolus, which causes haemoptysis
- h) Chest pain on deep breath
- i) Phlegmasia alba dolens

Deep vein thrombosis may sometimes occur without any noticeable symptoms.

Sign:

- a) Palpable distal pulses
- b) Heart rate, pulse rate, temperature: Increased
- c) HOMANS Sign: Pain in the posterior calf or knee with forced dorsi-flexion of the foot
- d) MOSES Sign: Gentle squeezing of the lower part of the calf from side to side
- e) Trendelenburg test: Positive

Clinical Assessment of DVT:

Clinically we assess the deep vein thrombosis (DVT), with the help of WELLS Score, which is done mainly to determine the pulmonary embolism

Simplified Wells Score

Variable	Points
Clinical Signs or Symptoms of Deep-Vein Thrombosis	3.0
Alternative Diagnosis Less Likely Than Pulmonary Embolism	3.0
Heart Rate >100 bpm	1.5
Immobilization or Surgery in the Previous 4 Weeks	1.5
Previous Venous Thromboembolism	1.5
Hemoptysis	1.0
Active Cancer	1.0
A total Score of ≤ 4.0 Indicates that PE is Unlikely, and a Score > 4.0 Indicates that a PE is Likely	

Figure: Wells Score

Investigation

The 'Gold standard' for the diagnosis of DVT is '**VENOGRAPHY**'

- a) **Doppler ultrasound:** The tip of the doppler transducer is positioned at a 45 to 60-degree angle over the expected location of the artery to identify the blood flow
- b) **Computed Tomography:** It provides cross sectional image of soft tissue & visualizes the volume changes in the area
- c) **MRI:** 97% Sensitive & 95% specific
- d) **D-dimer test**

Complication

A concerning complication associated with deep vein thrombosis is pulmonary embolism.

A) Pulmonary embolism:

A pulmonary embolism occurs when a blood vessel in your lung becomes blocked by a blood clot (thrombus) that travels to your lungs from another part of your body, usually your leg.

A pulmonary embolism can be fatal. So, it's important to be on the lookout for signs and symptoms of a pulmonary embolism and seek medical attention if they occur. Signs and symptoms of a pulmonary embolism include:

- Unexplained sudden onset of shortness of breath
- Chest pain or discomfort that worsens when you take a deep breath or when you cough
- Feeling lightheaded or dizzy, or fainting
- Rapid pulse
- Coughing up blood

b) Postphlebitic syndrome:

A common complication that can occur after deep vein thrombosis is a condition known as postphlebitic syndrome, also called postthrombotic syndrome. This syndrome is used to describe a collection of signs and symptoms, including:

- Swelling of your legs (edema)
- Leg pain
- Skin discoloration
- Skin sores

This syndrome is caused by damage to your veins from the blood clot. This damage reduces blood flow in the affected areas. The symptoms of postphlebitic syndrome may not occur until a few years after the DVT

c) Paget-Schroetter Disease:

which is also called upper extremity DVT in which blood clot forms in the deep vein of arms. It is a rare type of DVT that mostly occurs in young persons (men are more affected than women with this) after intense exercise or sports activity involving upper arms. Symptoms include pain, swelling, warmth in the arm along with redness or blueness

d) Budd-Chiari Syndrome:

is a rare condition that mostly arises from a blood clot that narrows or blocks the hepatic vein or the hepatic part of inferior vena cava. The signs and symptoms depend upon the severity of the condition. It includes pain in abdomen, weight loss, ascites (buildup of fluid in abdomen), gastrointestinal bleeding, enlarged liver, jaundice and enlarged spleen

General Management:

The primary objective of the treatment or management of DVT are to prevent pulmonary embolism, to reduce morbidity & to prevent or minimize the risk of developing postphlebitic syndrome

- a. To take proper bed rest
- b. Encourage the patient to perform gentle foot & leg exercises every hour
- c. Increase fluid intake
- d. Avoid deep pressure on affected part
- e. Avoid long standing, heavy work
- f. Avoid smoking, alcohol
- g. Wear loose fitting cloths
- h. Regular physical exercises
- i. Avoid sedentary life style & maintain weight

Homoeopathic Approach

Homoeopathy treats the person as whole. It means that homoeopathic treatment focuses on the patient as a person, as well as his pathological condition. The homoeopathic medicines are selected after a full individualizing examination & case-analysis, which includes the medical history of the patient, physical & mental, constitution, family history, presenting symptoms, underlying pathology, possible causative factors etc. A miasmatic tendency (predisposition/susceptibility) is also often taken into account for the treatment especially chronic disease. A homoeopathy doctors tries to treat more than just the presenting symptoms. The focus is usually on what caused the disease

condition? Why this patient is sick? The disease diagnosis is important but in homoeopathy, the cause of disease is not just proved to the level of virus, bacteria. Other factors like mental, emotion, & physical stress that could predispose a person to illness are also looked for. Now a days, even in conventional system also considers a large number of diseases as psychosomatic.

The correct homoeopathic remedy tries to correct the disease predisposition. The focus is not curing the disease, but to cure the person who is sick, to restore the health. If a disease pathology is not very advanced, homoeopathy remedies do give a hope for cure but even in incurable cases, the quality of life can be greatly improved by homoeopathic medicines. In the case of DVT, we must follow our basic principle & treat the patient accordingly. But, there is lots of risk factor & aggravating factor is present in DVT, so we must manage the patient along with medicine.

Miasmatic Scenario:

A) **PSORA:** Cramp in the lower extremities in calves of legs, in feet

Burning of soles, numbness of extremities with tingling sensation

Constant chilliness,

Coldness of the parts,

Chilblains.

Aggravated by cold, lying down, after sleep, ameliorated by hot application & hot drink

B) **SYPHILIS:** Stitching, lancinating, shooting pain in the periosteum,

Pulmonary embolism with sudden death.

Complaints aggravated at night, change of weather, > cold & damp

C) **SYCOSIS:** The patient especially worse by cold, damp, rest, damp weather

better by moving & stretching.

Stiffness, soreness, especially lameness is very characteristic

Homoeopathic Therapeutics

Well selected Homoeopathic remedies are best for the treatment of Deep vein thrombosis. Some of the important remedies are given below.

ARNICA MONTANA - Arnica mon is one of the top remedies for thrombosis, it has the power of dissolving the thrombus and make the blood thin. Veins distended and there is numbness in feet. Bruised pain in leg as if beaten.

APIS MELLIFICA- Apis Mellifica is another excellent remedy for DVT with stinging pain and swelling of legs. The feet swollen and stiff, sore, sensitive with stinging pain. There is also swelling of the knee, which is shiny, sensitive, sore with stinging pain. Legs and feet waxy, pale swollen and edematous. Limbs may feel heavy, numb and immovable.

BOTHOROPS-Bothorops is best for DVT after surgery, especially right side. Here the muscular tissues are filled with black blood. The leg veins are swollen and painful. The skin, swollen, livid, cold with hemorrhagic infiltration. Gangrene of affected part.

VIPERA -Vipera is excellent for DVT due to prolonged sitting. When the legs are allowed to hang down, it seems as if they would burst and the pain is unbearable. The patient is obliged to keep the limbs elevated. There are severe cramps in the lower limbs. The veins are swollen and sensitive due to severe pain.

HAMAMELIS VIRGINICA -Hemamelis is another excellent remedy for DVT with a bursting feeling in the legs. There is tired feeling in legs. Legs swollen with a tense, bursting feeling from pain. The joints also feel tense with pain.

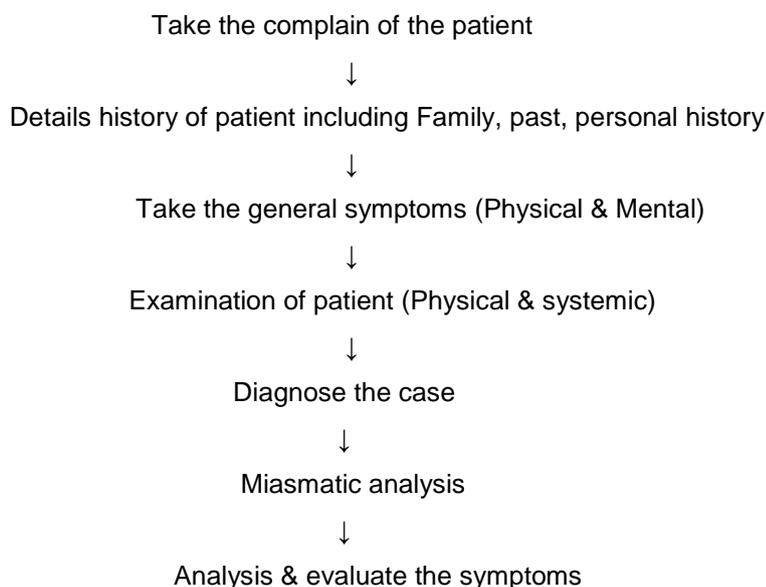
LACHESIS - Lachesis is another excellent remedy for DVT with joint pain. There is cramps in the calves, especially left side with swelling in the ankles. There is a bluish swelling and pain in joints. The knee joint feel cold as if hot air is going through.

CALCAREA IODATA -Calcarea iodata is best for DVT with indolent ulcers. There is tired feeling in lower extremities, especially in the calves. There is pain across the anterior surface of the upper third of both legs as if beaten. There is numbness along with dull heavy feeling in legs.

SECALE CORNUTUM -Secale cor is another excellent remedy for DVT with violent cramps. There is severe cramps in calves. Another striking feature is icy coldness of limbs. There is numbness and violent pain in legs.

Note: *These are few most commonly use medicine. But, we cannot forget our basic principle i.e individualization. We follow it & medicine should be selected on the basis of symptom-similarity*

Process of case-taking:



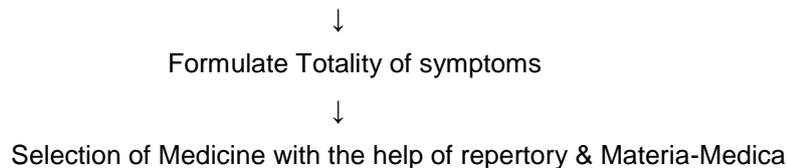


Figure: Schematic diagram of Homoeopathic approach in DVT

Conclusion

Homeopathy is a wonderful science that takes a natural approach to healing. Homeopathic medicines are made from natural substances and are therefore, safe and have no toxic side effects. This is also what makes them more effective in treatment of DVT. Homeopathic medicines act at the root level and stop further progression of the disease. They stimulate the disease fighting mechanism of the body. As the healing system of the body is strengthened, the disease is completely eradicated

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