Ayurvedic Management of Deep Vein Thrombosis. - A Case Study

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INTRODUCTION

DVT (deep vein thrombosis) is a disease that often goes undiagnosed. DVT (deep vein thrombosis, often called venous thrombosis) is a blood clot that forms in a vein deep inside the body. Blood flow via the vein may be partially or entirely stopped by the clot. Venous thrombosis (thrombophlebitis) and deep vein thrombosis are the two forms (phlebothrombosis). When a DVT breaks loose and enters the circulation as an embolus, it lodges in and totally
Deep venous thrombosis (DVT) is frequent in the lower leg, thigh, or pelvis, although they can also occur in the arm, brain, intestines, liver, or kidney. Deep vein thrombosis (DVT) is an illness that goes unnoticed. DVT is caused by the virchow's trio of venous stasis, hyper coagulability, and endothelial injury. The two types are venous thrombosis [thrombophlebitis] and deep vein thrombosis [phlebothrombosis]. The more dangerous of the two is DVT. Prothrombin deficiency and genetic thrombophilia are both congenital and acquired risk factors for DVT. Other risk factors include advanced age, obesity, surgery, trauma, neoplasm, heart disease, oestrogen hormone therapy, pregnancy, and immobility. DVT is generally asymptomatic, and only 40% of patients are clinically manifested. It is characterized by pain at the site of thrombosis that is worsened by muscle action. DVT is a life-threatening condition that can cause thromboembolism and result in immediate death as a consequence.

Deep venous thrombosis (DVT) is frequent in the lower leg. Venous thrombosis can be caused by a variety of reasons, including age, major surgery, malignancy, trauma, prolonged bed rest, myelo-proliferative disease, ankle sprain, infection, varicose veins, and certain oral contraceptive pills.

DVT in the lower legs can cause pain, calf discomfort, edoema, dilated superficial veins, pyrexia, redness, or no visible sign or symptom at all. Cellulitis in the lower limb can develop into a DVT as a result of an accident or illness. Duplex ultrasonography, which was employed in this study, is the only credible approach to confirm diagnosis because it is non-invasive, risk-free, cost-effective, and more widely available.

**METHOD**

This is a single case study of a 27-year-old male patient who has been complaining of headaches, soreness, swelling, discolouration of the left leg below the knee, and difficulties walking and standing for the past two years at the Panchakarma Department of the Rajasthan Ayurved University. Pain was noticeable at rest and worsened with exertion. He received allopathic treatment in an allopathic facility for his issues. Since six months, his problems have worsened. Swelling and pain were considerably reduced. The standard of living has improved. The patient was able to return to work. He can now stand and walk for extended periods of time. Hair loss in the left leg was previously complete, but it has now returned to normal.

Four years ago, the patient was taken to the hospital with a terrible headache and was diagnosed with pulmonary embolism. He had no prior symptoms or signs of the disease, and there was no family history of it. He was given anticoagulants and antithrombolytic injections to help with his condition. One year later, he began to have pain and tingling in his left leg. He noticed swelling after a while, which eventually developed to the point where his regular tasks were being restricted. He couldn't stand or walk for long periods of time.

All haematological and biochemical tests were normal, including complete blood counts, glucose, TSH, urea, creatinine, liver function tests, lipid profile, bleeding time, and clotting time. Other possibilities were ruled out, including the factor V Leiden mutation, the Prothrombin gene mutation, the MTHFR gene mutation, and serum homocysteine. His ESR and LDL levels were also somewhat increased, at 25 mm/hr (reference value 0-100) and 105.7 mg/dl (reference value 0-100), respectively. On November 20, 2019, a doppler ultrasound of the right lower limbs indicated a partial deep vein thrombus in the fresh thrombs seen in femoro popliteal venous system, as well as soft tissue edoema in left lower leg and foot due to reduced venous system. The medial section of the venogram is revealed. The right limb was edematous and enlarged on physical examination. There was pitting edoema and local discomfort in the calf region. The skin was hot and hyperemic. On examination, little hemorrhagic patches were discovered. A non-healing lesion was discovered on the right leg's lateral malleolus. There were no varicose veins in either of the legs. On the basis of symptoms and a doppler examination, the patient was identified as Grathita Rakta Vikara (deep vein thrombosis).

**Diagnosis**

DVT can't be diagnosed just on a patient's medical history or a physical examination. DVT can be symptomatic or asymptomatic in the lower limbs. Due to the lack of identifiable signs and symptoms in DVT, clinical diagnosis is difficult. In symptomatic individuals, USG
(ultrasonography) of the femoral and popliteal veins has a sensitivity and specificity of 97 percent in diagnosing DVT. Venous USG is the examination of choice in patients who have been classified as having a high risk of DVT. If the venous USG is positive, DVT is diagnosed. The diagnosis of DVT, also known as ischemic stroke, was confirmed in this case based on a combination of positive venous USG results, physical examination findings, imaging, and thyroid profile.

Assessment, Treatment-
The findings of venous USG, lipid profile, thyroid profile, and other investigation reports were used as a criterion of assessment in this situation. Pre-treatment (baseline) and post-treatment assessments were taken in total (after 2 months completion of treatment). According to Ayurveda, the patient had 'Ekanga shotha / Raktavrita vata and pakshaghata' and was treated with various panchkarma procedures such as Upanaha sweda (applying medicated paste over affected area), Kashaya dhara (pouring decoction over affected area),). Initially, the goal of treatment was to turn the patient off of western medications and minimize swelling; later, the goal was to prevent the thrombus from spreading, to prevent pulmonary embolism, and to manage hypothyroidism, stroke, hypercholesterolemia, and hypertension.

Bheshaja Chikitsa-
- Mahamanjisthadi Kwatha 20ml twice a day
- Sarivadyasava 20ml twice a day
- Punarnawadi Kwatha 20ml twice a day
- Kaishor Guggulu 500mg twice a day
- Gandhaka Rasayana 250mg twice a day
- Laghumalini Vasanta 250mg twice a day
- Punarnava Mandur 250mg twice a day

For 20 days

RESULT
In the patient's symptoms, there was a significant improvement. Swelling and pain were considerably reduced. The standard of living has improved. He can now stand and walk for extended periods of time. Hair loss in the left leg was previously complete, but it has now returned to normal.

DISCUSSION
Bheshaja Chikitsa - Mahamanjisthadi Kwath, Sarivadyasava, & Laghumalini Vasanta serve as Rakta Shodhana, Pachana, Deepana, and Rakta Prasadana, respectively. Because Sira is the Upadhatu of Rakta Dhatu, it has a similar effect on Sira, which may be beneficial for lowering redness in DVT.

Punarnavadi Kwatha and Punarnava Mandura have diuretic properties, which help to minimise swelling. Rakta Prasadana and Rakta Poshana are properties of Mandura that aid in blood nutrition.

Kaishor Guggulu has a property called Shoolaghna, which helps to relieve pain and soreness. It also has the properties of Rasayana and Deepan, which may help to increase Dhatubala.

The properties of Kaphaghna and Kandughna in Gandhaka Rasayana may help to decrease symptoms. To lessen the swelling of the right lower limb, Kashaya dhara with 'Dashamoola kashaya' and Upanaha sweda with "dashang lep " were prescribed. The swelling of the right thigh (mid thigh circumference) was reduced from 21 to 18 inches after 9 days of these treatments, the swelling of the right knee was reduced from 14.5 to 14 inches, and the swelling of the right calf (mid calf circumference) was reduced from 12 to 10.8 inches. Following the total removal of right lower limb edema, patra pottali pinda sweda were used to cure the right side hemi paresis. After the rookshana (dry / rough) procedures such as Udwartanam (massage with herbal powders) with 'Kola kuluthadi choornam' were prescribed.

CONCLUSION
In this situation, the Ayurvedic diagnosis of 'Ekanga shotha / Raktavrita vata' is made. Various Ayurvedic panchakarma procedures and internal medicines have shown promising results, particularly in reducing swelling, reducing the severity of deep vein thrombosis, better managing associated conditions such as hypothyroidism,
hypercholesterolemia, hypertension, and stroke, and improving quality of life without causing any adverse effects in the current case. The findings of the current study cannot be generalised, and more long-term follow-up studies with a large sample size are needed to confirm these statements. In this situation, the Ayurvedic diagnosis of ‘Ekanga shotha / Raktavrita vato’ is made. Various Ayurvedic panchakarma procedures and internal medicines have shown promising results, particularly in reducing swelling, reducing the severity of deep vein thrombosis, better managing associated conditions such as hypothyroidism, hypercholesterolemia, hypertension, and stroke, and improving quality of life without causing any adverse effects in the current case. The findings of the current study cannot be generalised, and more long-term follow-up studies with a large sample size are needed to confirm these statements. The Ayurvedic diagnosis of ‘Ekanga shotha / Raktavrita vato’ is made for ‘DVT’ in present case. Various Ayurvedic panchakarma procedures and internal medicines have provided promising results especially in reducing the swelling, decreasing the severity of thrombosis in deep veins, managing various associated conditions like hypothyroidism, hypercholesterolemia, hypertension, stroke in a better way and also improving quality of life without causing any adverse effects in present case. Present up studies with large sample are required to substantiate these claims.

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