



Podcast Dr. Karetova - Part 3

In this podcast, we'll speak of Acute Complications of Chronic Venous Disease with focus on Superficial vein thrombosis and deep vein thrombosis

Today we are here with

Dr. Debora Karetová,

MD, Associated Professor of Medicine at Charles University in Prague, Outpatient Department Head at Second Department of Internal Medicine, Charles University in Prague, and she is the president of the Czech Angiology Society.

Goodmorning Dr. Karetová

DR.

Good morning.

Dr. Karetová,

can chronic venous disease, particularly when it involves extensive varicose veins, be complicated by an acute condition?

So, superficial venous thrombosis is really an acute complication of chronic venous disease, and usually it's not only once in the patient, but it occurs repeatedly.

It's defined as a pathologic process that involves a vein of the superficial circulation and is characterized by inflammation and formation of the thrombus.

The occurrence of superficial vein/venous thrombosis in patients with varicose vein is relatively common. Nearly 60% of them may develop during life dysphlebitis and the problem is that it could progress to deep vein thrombosis and the real incidence of superficial vein thrombosis is probably underestimated.

And what are the symptoms of acute superficial vein thrombosis?

Superficial thrombophlebitis starts with microscopic thrombosis. There is venostasis, vessel wall injury maybe sometimes.

We can see abnormal coagulability. So, microthrombi could propagate and subsequently form a macroscopic thrombi.

Vascular endothelial injury results in thrombus formation by triggering an inflammatory response, and that results in immediate platelet adhesion.

So, platelet aggregation is mediated by thrombin and thromboxane A₂.

And about diagnosis, how to diagnose SVT?

It's not so complicated.

It's usually the clinical diagnosis because we can see red, tender and purple, the cord of the skin. So patient comes to us because of redness and pain in a certain part of the limb.

And the surrounding area may be oozing and the entire area is painful for patient. However, the problem is that the clinical picture alone is not always decisive for the appropriate treatment.

And in most patients, we have to assess the extent of the disease by ultrasonographic examination of the superficial and optimally also of deep veins.
Because the clinical impact of SVT may be and usually is underestimated.

Previously, it was considered self-limiting disease, but nowadays we have learned from the studies that many times it's complicated by extension of thrombus from superficial vein to deep vein system and even it could lead to pulmonary embolism.

But do we know how venous thrombosis develops and what are the main risk factors for its occurrence, whether in the deep or superficial veins?

In the development, Virchow triad, consisting of altered blood flow, changes in the vessel wall, and abnormal coagulation, all these three main categories of thrombus formation are recognized to be possible risk factors, similar to thrombus formation in other deep vein systems.

While stasis and trauma of the endothelium have been cited as causes of superficial vein thrombosis, the importance of hypercoagulability has been questioned, but nowadays sure that also with stasis in these varicose veins, there is enhancement of concentration of coagulation factors, and it could lead to hypercoagulable state.

So the risk factors for superficial vein thrombosis and deep vein thrombosis are similar.
That is advanced age, varicosity, pregnancy, postoperative status, immobilization, malignant neoplasms, autoimmune diseases, obesity, trauma, hypercoagulatory states of different etiologies, also use of oral contraceptives or hormone therapies, and previous episodes of DVT or pulmonary embolism.

Also, many catheters in the veins, vascular excess catheters, that can also tend to this irritation of endothelium.

And also infusion of hypertonic solutions can lead to endothelial damage, like autoimmune diseases as well.

So, varicose veins are the primary risk factor for lower limb, superficial vein thrombosis, and they are found in nearly 90% of all cases of superficial vein thrombosis.

Among rare reasons are autoimmune disorders like Burger's disease or Behçet's disease, but it's a minority of the problem.

Thank you so much Dr. Karetova we really appreciate your contribution

Thank you very much it was a pleasure for me as well

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