

## Acute Deep Venous Thrombosis of the Left Limb in Range from Vena Poplitea Up to Vena Ilica Communis Ending in the Stream of Vena Cava Inferior in Patient Pregnant in 38th Week of Pregnancy – Case Report – Is it Possible to Manage these Kind of Patients on just the Clinics of Obstetrics and Gynecology?

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## 1. Introduction of Deep Vein Thrombosis

Thrombosis is a blood clot in a blood vessel (a vein or an artery). Venous thrombosis occurs in a vein. Veins are the blood vessels that take blood towards the heart and lungs whereas arteries take the blood away. A deep vein thrombosis (DVT) is a blood clot that forms in a deep vein of the leg, calf or pelvis.

Pregnancy increases your risk of a DVT, with the highest risk being just after you have had your baby. However, venous thrombosis is still uncommon in pregnancy or in the first 6 weeks after birth, occurring in only 1-2 in 1000 women.

## 2. What are the symptoms of a DVT during pregnancy?

The symptoms of a DVT usually occur in only one leg and can include:

- A red and hot swollen leg
- Swelling of your entire leg or just part of it, or it may just feel heavy.

- Pain and/or tenderness – you may only experience this when standing or walking.

## 3. Why is a DVT Serious?

Venous thrombosis can be serious because the blood clot may break off and travel in the bloodstream until it gets lodged in another part of the body, such as the lung. This is called a pulmonary embolism (PE) and can be life threatening. However, dying from a PE is very rare in women who are pregnant or who have just had a baby.

The symptoms of a PE can include:

- Sudden unexplained difficulty in breathing
- Tightness in the chest or chest pain
- Coughing up blood (haemoptysis)
- Feeling very unwell or collapsing

You should seek help immediately if you experience any of these symptoms. Diagnosing and treating a DVT reduces the risk of developing a PE.

## 4. What Increases my Risk of DVT or PE?

You are at increased risk of venous thrombosis if any of the following apply to you.

### Before pregnancy

If you:

- are over 35 years of age
- have already had three or more babies
- have had a previous venous thrombosis
- have a mother, father, brother or sister who has had a venous thrombosis
- have a thrombophilia (a condition that makes a blood clot more likely)
- have a medical condition such as heart disease, lung disease or arthritis – your doctor or midwife will be able to tell you whether any medical condition you have increases your risk of a DVT/PE
- have severe varicose veins that are painful or above the knee with redness/swelling
- are a wheelchair user.

### Lifestyle

If you:

- are overweight with a body mass index (BMI) over 30, are a smoker or use intravenous drugs.

## 5. Diagnostics

### 5.1. How can be DVT diagnosed during pregnancy?

#### DVT

If you are experiencing symptoms, your doctor will examine your leg and may recommend an ultrasound scan of your leg to see whether you have a thrombosis. If no thrombosis is seen but you are still having symptoms, the ultrasound scan may be repeated a few days later.

The tests may also include:

- a chest X-ray – this can also identify common problems that could be the cause of your symptoms, such as a chest infection
- a CT scan (specialised X-ray) of your lungs
- a VQ scan (ventilation/perfusion scan) of your lungs – this involves a drip into a vein in your arm
- an ultrasound scan of both your legs if you have any symptoms of a DVT.

### 5.2. Are there any Risks with having the Tests?

The chest X-ray, CT scan and VQ scan all use radiation. The chest X-ray uses a tiny dose of radiation that is not considered harmful for you or your baby.

The CT and VQ scans both carry a small risk but this needs to be weighed up against the risk to you and your baby of an undiagnosed PE. The risk to your baby of developing childhood cancer

after a VQ scan or a CT scan is extremely low although it is slightly higher with a VQ scan than with a CT scan.

However, a CT scan gives a higher dose of radiation to your breasts than a VQ scan and the lifetime risk of breast cancer may be increased. Your doctor will talk to you about the benefits and risks and which test would be best for you.

### 5.3. Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.

#### Ask 3 Questions

To begin with, try to make sure you get the answers to 3 key questions, if you are asked to make a choice about your healthcare:

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?[1]

## 6. Case Report

### 6.1. 3.9.2013 – First Check-Up - 36th Week of Pregnancy

32-year primipara in outward office in 36th week of pregnancy, baby movements normal, premature rupture of membrane not detected, no bleeding, BP 120/70 mmHg, weight 81 kg, limbs upper and lower without edema or pain or varixes, smear for GBS negative, only E.coli in smear -given local therapy.

Vaginal obj.: cervix 2 cm, sacral pushed, for thin finger, uterus normotonus, foetal heart rate 132/min/

In family history there was supposition for hereditary thromboembolic disease. Until 36th week she just didn't develop any suspected signs.

She was recommended for EKG, ultrasound, blood work and another check-up in a week.

### 6.2. 10.9.2013 – Second Check-Up – 37th Week of Pregnancy

physiological like before, urine negative

### 6.3. 17.9.2013 – Third Check-Up – 38th Week of Pregnancy

Subj.: foetal movements normal, PROM not detected, no bleeding, BP 120/80 mmHg, weight 82 kg, limbs upper and lower without edema or pain or varixes, occasional epitaxy obj; smear for GBS negative, only E.coli in smear -given local therapy. Urine test negative

Vaginal obj.: cervix 2 cm, sacral pushed, loose for finger, uterus normotonus, foetal heart rate 132/min

In blood work there was hemoglobin 133g/l therefore she had to take ferrotherapy.

### 6.4. 24.9.2013 – Fourth Check-Up – 39th Week of Pregnancy

Subj.: foetal movements normal, PROM not detected, no bleeding,

BP 120/80 mmHg, urine test negative, weight 82 kg, foetal heart rate 135/min, limbs upper and lower without edema or pain or varixes, occasionally epitaxy obj; smear for GBS negative, only E.coli in smear -given local therapy.

Vaginal obj.: cervix 2 cm, sacral pushed, loose for finger 2 fingers, uterus normotonus, baby-beat 135/min

In blood work there was hemoglobin 133g/l therefore she continued the ferrotherapy and also local therapy for E.Coli. Laboratory blood work taken again.

### **6.5. 27.9.2013 – Fifth Check-Up – 39 Week with Complications**

Our 32-year patient primigravida with due date 5.10.2013 comes for pregnancy check-up with complaint about 3-day severe pain in left inguina down to left limbs with severe edema and Homans sign positive. There was suspicion for left lower limb thrombosis and patient was admitted to the ward of risk pregnancy.

Patient admitted to the ward underwent conciliatory treatments and all necessary check-ups

Basic markers:

BG – B positive, anti Xa 0,96, f VIII 177,51, Protein C 104,9, Protein S 36,10

Blood work: Le 13,98, Er 4,32, Hb 119, Htk 0,377, MCV 89,1, MCH 28,1, MCHC 316, RDW-SD 43,5, RDW-CV 13,5, Tr 226, PDW 13,3, MPV 11,0,PLCR 32,80, trombocrite 0,25

Quick test: Quick 104, Quick-INR 0,96

Activated partial troomboplastine time: APTT 27,5, APTT-RA-TIO 0,83, FIBG 5,88, ANTI-thrombin III 95,29, D-Dimers 8071,8  
Hematology consilium 28.9.2013:

Full anti-trombotic therapy – Fraxiparine 0,8 ml twice a day, elevation of limbs and suggested consultation of National institute of heart and vein dishes for potential inserting of caval filter in case of urgent Caesarian section on the I.gynecology-obstetrics clinic.

### **6.6. 1.10.2013 – Consilium at National Institute of Cardiovascular Diseases**

With the consiliary resume:

Dg: acute ilio-femoral deep vein thrombosis lateris sinistral [VIE/VFC/VFS/prox VSM, susp VIC

In family history episode of hereditary trombembolic disease

## **7. Conclusion**

Dg. In 38th week of pregnancy with acute ilio-femoral deep vein thrombosis of left limp without a amnesia of pulmonary embolism, without any contraindication for use of anticoagulants, after consultation of intervention radiologist Vulev MD and vein surgeon Tomka MD there is no need of indication of endovascular implantation of caval filter. Although according to up to date conservative approach of LMWH therapy according to anti Xa activity there was question raised about stabilization of the patient about the term of her Caesarian section trying to push the term on later

to stabilize the thrombus and decrease the risk of pulmonary embolism.

Although the same day there was multi-disciplinary consilium between the gynecology-obstetrics clinics and National Institute of Cardiovascular Diseases about possible setting the precedent cooperating in this case. There was very high risk of massive pulmonary embolism and therefore it was decided that it would be more sufficient to do the Caesarean section with obstetrician team coming to do it in the NICD with intervention cardio surgical team standing by for potential sternotomy during operation in case of embolism to pulmonary artery.

And National Institute of Children's Diseases had the only possibility to provide the transportation incubator and take care of the newborn from the first seconds with special care. Therefore the head of neonatal intensive care Dana Dolnikova MD was asked to set her team to stand-by the caesarean section at the NICD.

### **7.1. 2.10.2013**

The obstetrician team set the operation in the National Institute of Cardiovascular Diseases with cardio surgical team set their potential part for their type of surgery

Obstetric Surgery – caesarean section – without any complication and need of cardio surgical intervention. The neonatal team took the newborn to their hospital for necessary check-ups. The newborn was given sufficient treatment and didn't suffer any complications.

Dg.: Graviditas in ultimo, Asfyxia fetus intrauterina imminens, Oligohydamnion gravis, Funiculus umbilicalis fetus colli circumflectens 2x, Phlebotrombosis I-F l.sin, Transport e neonati

### **7.2. 3.10.2013**

Patient was stabilized with all fyziological functions in normal still observed at the NICD with daily observation of gynecologist who was coming from other hospital. Patient was discharged third day after caesarean section from NICD and transported to I.gynecology-obstetrics clinics along with the baby who was closely observed and was discharged from neonatal clinics to be with her mother.

### **7.3. Consilium 3rd Day after Caesarean Section**

Blood work: all factors of coagulation showed significant improvement

Surgical and hematologist consilium with suggestion of continuing therapy of Clexane 0, 8ml twice a day. Hematologist pointed out the importance of hereditary trombembolic diseases and that patient should be observed in this field, need to control the parameters of f. V Leiden mutation, prothrombin mutation, coagulation parametres, AT III, antibodies ACLA and beta 2-glycoprotein

Angiologic consilium: Acute left iliofemoropopliteal thrombosis [May Thurner syndrome?]

Patient was discharged home 12.10.2013 stabilized with healthy

newborn. Until this day she is observed by hematologist with the proof of V. Leiden mutation, and need of regular observation of coagulation parametres.

## **8. Discussion**

We presented the case of pregnant patient primipara who until 39th week didn't show any signs of trombembolic disease. While it was a severe case there had to be not only multidisciplinary consiliums but also multi clinic and multi hospital cooperation. This shows that even if one clinic doesn't have enough resources to handle such a case, there are still possibilities to manage everything to the best outcome. Thanks to cooperation of National Institute of Cardiovascular Diseases and National Institute of Children's Diseases with I. Gynecology-obstetrics clinic which are separated throughout the whole town with necessity of transportation not only the patient, the newborn but also the whole surgical and neonatal teams the patient and her baby are healthy and contact us each year with gratitude.

## **9. Citations**

This information has been developed by the RCOG Patient Information Committee. It is based on the RCOG Green-top Clinical Guideline Thromboembolic Disease in Pregnancy and the Puerperium: Acute Management (April 2015). The guideline contains a full list of the sources of evidence we have used. This leaflet was reviewed before publication by women attending clinics in Glasgow, Coleraine and Sunderland, and by the RCOG Women's Network.