

Deep Vein Thrombosis in Post-partum Case of Caesarean Section: A Case Report

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Abstract

Deep vein thrombosis (DVT) is one of the causes of maternal morbidity and mortality. Its incidence is about 1 per 1000 deliveries, of which 1-2% are fatal. In pregnancy, the risk of DVT increases by 5-10 times and in caesarian section the risk further increases by 5-10 folds. The risk of thrombosis was highest in the third trimester of pregnancy and in the immediate postpartum period. Clinical features associated with lower limb thrombosis are: Edema, tenderness, positive Homan sign. Ultrasound is more useful in the diagnosis of proximal DVT (femoral and popliteal veins). We are reporting a case of 33-year-old female presented to our hospital with complaints of 38 weeks pregnancy with labor pains. She had no personal or family history of thromboembolism. For fetal distress, her caesarian section was performed. On the 3rd post-operative day, she developed swelling, tenderness, edema and redness in the right lower limb. Color Doppler ultrasound showed thrombosis of external iliac, femoral, popliteal and tibial vein. Antithrombotic therapy was started, and compression bandage was done and patient responded to the therapy. Early ambulation in post-operative period is crucial to prevent such deadly complication.

Key words: Post-partum, Thrombosis, Vein

INTRODUCTION

Deep vein thrombosis (DVT) is one of the causes of maternal morbidity and mortality. Its Incidence is about 1 per 1000 deliveries, of which 1-2% are fatal.¹ In pregnancy, the risk of DVT increases by 5-10 times and in caesarian section the risk further increases by 5-10 folds. The risk is highest during labor and in the immediate postpartum period.^{1,2} In the post-partum period the risk of DVT is five times greater than during pregnancy.³

The risk of DVT is between 0.5 and 3.0 per 1,000 women during pregnancy. Due to the prevalence and severity of DVT pregnant women at risk should be offered anticoagulant therapy. Hyper-coagulable state in pregnancy is due to changes in the coagulation system. About 50% of

women during pregnancy who have thrombotic event have congenital or acquired thrombophilia. In approximately 50% of patients with a hereditary thrombophilia, the initial thrombotic event occurs in the presence of an additional risk factor such as pregnancy, oral contraceptive use, orthopedic trauma, immobilization, or surgery.¹

CASE REPORT

We report a case of a 33-year-old primiparous women admitted to our hospital with complain of 38 week pregnancy with labor pains. She had no personal or family history of thromboembolism. For fetal distress emergency caesarian section was performed. The caesarian was performed without any complication. On 3rd day of operation patient developed swelling, redness, pain in the right lower leg. Homan sign (pain on passive dorsiflexion of the foot) was positive. Doppler ultrasound of right leg showed thrombosis of the external iliac vein, femoral vein, popliteal vein, and tibial vein. Her hemoglobin-9 g%, platelet count-1,50,000, prothrombin time-5.06 (0.8-1.2), partial thromboplastin time ratio-2.21 (0.8-1.2), fibrinogen-866 mg/dl (200-400), ATIII-81 (80-120), D-dimer-.3376 ug/L (0-550). Patient was treated

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www.ijss-sn.com

Month of Submission : 02-2015
Month of Peer Review : 03-2015
Month of Acceptance : 03-2015
Month of Publishing : 04-2015

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with low molecular weight heparin (LMWH) (Enoxaparin 1 mg/kg body weight twice daily) and compression bandage. Patient responded to anticoagulation therapy and was discharged with an advice to attend the follow-up clinic for long-term anticoagulation advice for next 6 months to prevent a recurrent thromboembolic episode. Patient was discharged with anticoagulation treatment (Coumadin, maintaining INR between 2 and 3).

DISCUSSION

DVT is one of the important cause of maternal deaths.⁴ In pregnancy, there is the alteration between prothrombotic and anticoagulant factors, that increases fibrin deposition and decreases fibrinolysis, resulting in a procoagulant state.⁵ In the third trimester of pregnancy the flow velocity in the lower limb is reduced by approximately 50%,⁶ and 50% of DVT in pregnancy are associated with inherited or acquired thrombophilia.⁷ The most important risk factors are multiparity, puerperium, post-operative periods, infections, neoplasm, systemic lupus erythematosus and hypercoagulability states.¹

Diagnosis can be made by compression ultrasonography that has a sensitivity of 97-100% and a specificity of 98-99%,⁸ while contrast-enhanced computed tomography and magnetic resonance imaging may confirm the diagnosis and quantify thrombosis extension. Pulmonary embolism (PE) occurs in 13% of cases.⁹ Broad-spectrum antibiotics and intravenous heparin or LMWH should be started immediately. Anticoagulants must be continued for 3-6 months. Despite the use of LMWH, DVT and embolism may develop.¹⁰

Caval filter is recommended in extensive DVT and whenever discontinuation of anticoagulation might carry a high risk of PE.¹¹ There are no studies regarding the use of graduated elastic compression stockings (GCS) in pregnant women. However, it is likely that stockings could be beneficial.

Hence, the recommendation from the Royal College of Obstetricians and Gynecologists is that GCS (knee-length

with compression strength of 30-40 mm Hg) should be applied to help prevent post-thrombotic syndrome.

CONCLUSION

This leads to the conclusion that all women should be assessed for the risk factors of DVT in early pregnancy and that the assessment should be repeated if the woman is admitted to a hospital or develops intercurrent problems. The assessment should be repeated anyway intra-partum or immediately postpartum.

In our reported case, the complications could be prevented if early ambulation were advised to the patient. Early ambulation in the post-operative patient can prevent such a deadly complication.

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How to cite this article: Srivastava M, Bhatnagar P, Gupta M. Deep Vein Thrombosis in Post-partum Case of Caesarean Section: A Case Report. *Int J Sci Stud* 2015;3(1):219-220.

Source of Support: Nil, **Conflict of Interest:** None declared.