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STUDY OF HAEMATOLOGICAL PARAMETERS-PLATELET COUNT, ACTIVATED PARTIAL THROMBOPLASTIN TIME, PROTHROMBIN TIME AND INTERNATIONAL NORMALIZED RATIO IN PREGNANT FEMALES WITH AND WITHOUT DEEP VENOUS THROMBOSIS"

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ABSTRACT

Deep vein thrombosis having the haematological parameters- Platelet count, Prothrombin time, Activated partial thromboplastin time and International Normalized ratio in pregnant females with DVT and pregnant females without DVT. 50 pregnant females – bearing age (20 – 40 years) presented with signs of DVT was confirmed by ultrasound and was investigated for PT, APTT and platelet count other Healthy matched 50 pregnant females of child – bearing age (20- 40 years) presented without signs of DVT as control group were enclosed within the study. For all participants, clinical risk factors, smoking standing, and different demographic information were recorded from hospital reports. Platelet count is low in pregnant females with DVT than control group, while other parameters-Prothrombin time, activated partial thromboplastin time were significantly higher in pregnant females with DVT than control group except international normalized ratio which was found to be same. Form the study we concluded that Platelet count is low while other parameters- Prothrombin time, activated partial thromboplastin time were significantly higher in DVT patients compared to control group. Also, pregnant females (77.5%) with DVT deliver their baby with C-section.

INTRODUCTION

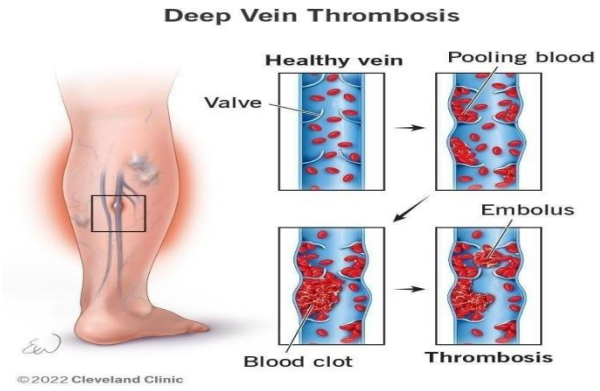
Deep vein thrombosis happens once a blood (thrombus) forms in one or additional of the deep veins in our body, sometimes in our legs. Deep vein thrombosis will cause leg pain or swelling however can also occur with no symptoms (1). Deep vein thrombosis occurs when blood clot(s) form in the deep-seated veins. It is common to occur in the legs during pregnancy due to increased pressure or strain on the lower body. These blood clots can have serious consequences when not attended in time

Symptoms of Deep Vein Thrombosis During Pregnancy

People suffering from deep vein thrombosis experience symptoms like intense pain, cramping, burning sensation, and discoloration of the skin around the blood clot. Other symptoms of DVT include heaviness in the legs, dark-coloured bulging veins, and warmth in the affected skin area. Pulmonary Embolism (Serious emergency condition in which the blood clot reaches the lungs), Chronic Venous Insufficiency (venous valves not functioning rightHow does deep vein thrombosis occur during pregnancy?

Although any person can develop deep vein thrombosis, pregnant women are at greater risk because of a number of factors that can affect the flow of blood in the body. Firstly, during pregnancy, a woman undergoes a number of hormonal changes. These hormonal changes can make the vein walls and valves smooth. This can lead to impaired functioning of the vein walls and valves. Also, the volume of blood inside the woman's body increases during pregnancy to sustain both the mother and the child. The number of veins, however, remains the same. Simultaneously, a significant increase in body weight is also seen. Both these factors combined increase the pressure on the veins and can lead to venous insufficiency, eventually leading to problems like varicose veins and deep vein thrombosis(4).

DVT itself is not life-threatening, but clots can dissolve and travel through the bloodstream. A pulmonary embolism (PE) occurs when a moving blood clot (embolus) lodges in a blood vessel in the lungs (5). This can be a life-threatening condition and requires prompt diagnosis and treatment. Half of patients who develop her DVT in the legs develop intermittent leg pain and swelling symptoms that can last for months to years. These conditions, called post- thrombotic syndrome, are caused by damage to the valves and lining of the veins, causing them to "pool" more blood than necessary. This increases pressure in the vein, causing pain and swelling (6). This state is characterized by: Accumulation of blood. Chronic leg



swelling.

Intravenous pressure is rising. Increased skin pigmentation or discoloration. Leg ulcer known as venous stasis ulcer.

Deep vein thrombosis (DVT) is an occlusive disease that affects venous return mechanisms. DVT usually affects the venous system of the lower extremities, with thrombus formation starting in the deep calf

veins and spreading proximally (7) It is a common venous thromboembolism (VTE) with an annual incidence of

1.6 per 1,000 persons (8). The rate of infiltration at a particular site varies according to anatomical location: 40% distal vein, 16% popliteal vein, 20% femoral vein, often 20% femoral vein, and pelvic vein 4% (9). A deep vein occlusion (DVT) may be a blood that typically forms within the deep veins of the legs, however also can occur within the arms, peritoneum veins, and cerebral veins. Deep vein occlusion may be a common and vital condition (10). It's one among the blood vessel occlusion, the third leading explanation for death from upset when coronary failure and stroke, and continual occlusion and "post-thrombotic syndrome" occur even in patients WHO haven't developed embolism. it's the most explanation for morbidity (11). Deep vein thrombosis is the major medical problem responsible for most pulmonary embolisms**.** Only early diagnosis and treatment can reduce morbidity (12).

According to the middle for malady management and bar (CDC), symptoms of DVT solely occur in regarding half the those that have this condition.

Common DVT symptoms include:

• Swelling in your foot, ankle, or leg, typically on one feat

• Cramping pain in our affected leg that typically begins in our calf

• Severe, unexplained pain in our foot and articulation plana

• An space of skin that feels hotter than the skin on the encompassing areas

• Skin over the affected space turning pale or a chromatic or blue color, counting on skin tone.

People with AN higher extremity DVT, or a blood within the arm, might not expertise symptoms. If they do, common symptoms include:

• Neck Pain

• Shoulder Pain

• swelling within the arm or hand

• blue- or darker-tinted skin color

• pain that moves from the arm to the forearm

• Weakness within the hand

People might not verify that they need DVT till they've felt emergency treatment for an embolism (blood clot within the lung) (13).

An embolism will happen once a DVT clot has stirred from the arm or leg into the respiratory organ. once AN artery within the respiratory organ becomes blocked, it's a life-threatening condition and needs emergency care (14).

Complications of DVT

The most serious complication of DVT happens once a locality of the clot breaks off and travels through the blood to the lungs, inflicting a blockage referred to as embolism (PE). If the clot is tiny, and with applicable treatment, folks will get over letter. However, there can be some injury to the lungs. If the clot is massive, it will stop blood from reaching the lungs and is fatal (15).In addition, common fraction to simple fraction of individuals United Nations agency have a DVT can have semipermanent complications caused by the injury the clot will to the valves within the vein referred to as post-thrombotic syndrome (PTS). folks with PTS have symptoms like swelling, pain, discoloration, and in severe cases, scaling or ulcers within the affected a part of the body. In some cases, the symptoms may be therefore severe that someone becomes disabled (16). For some folks, DVT and letter will become a chronic illness; regarding half-hour of individuals United Nations agency have had a DVT or letter ar in danger for one more episode (17).

MATERIAL AND METHODS

Study Design: The current study was a prospective observational study and case control. The study was conducted at GMC Anantnag, SKIMS Srinagar, GMC Srinagar, Wani hospital Anantnag, Gousia hospital Anantnag, District hospital kulgam, Lal ded maternity hospital Srinagar, City Lab Srinagar, Dr. Qadri haematological lab, City clinical laboratory Srinagar.

Data Collection:

1. Information collected victimization designed form together with demographic information (age, fetal age, medical record and different info and action parameters [platelet count, prothrombin time (PT), Activated Partial Thromboplastin Time (APTT) and international normalized ratio (INR)].

2. 40 females bearing age of 20-40 years given with signs of DVT throughout physiological state were investigated for protoplasm, activated partial clotting factor time and protoplasm count and 40 different pregnant while not signs of DVT be enclosed as management teams. All the participants completed the form containing their demographic details, their history like age, temporal arrangement of samples collected.

Inclusion and Exclusion Criteria:

Inclusion criteria:

Pregnant females between the age of 20-40 years.

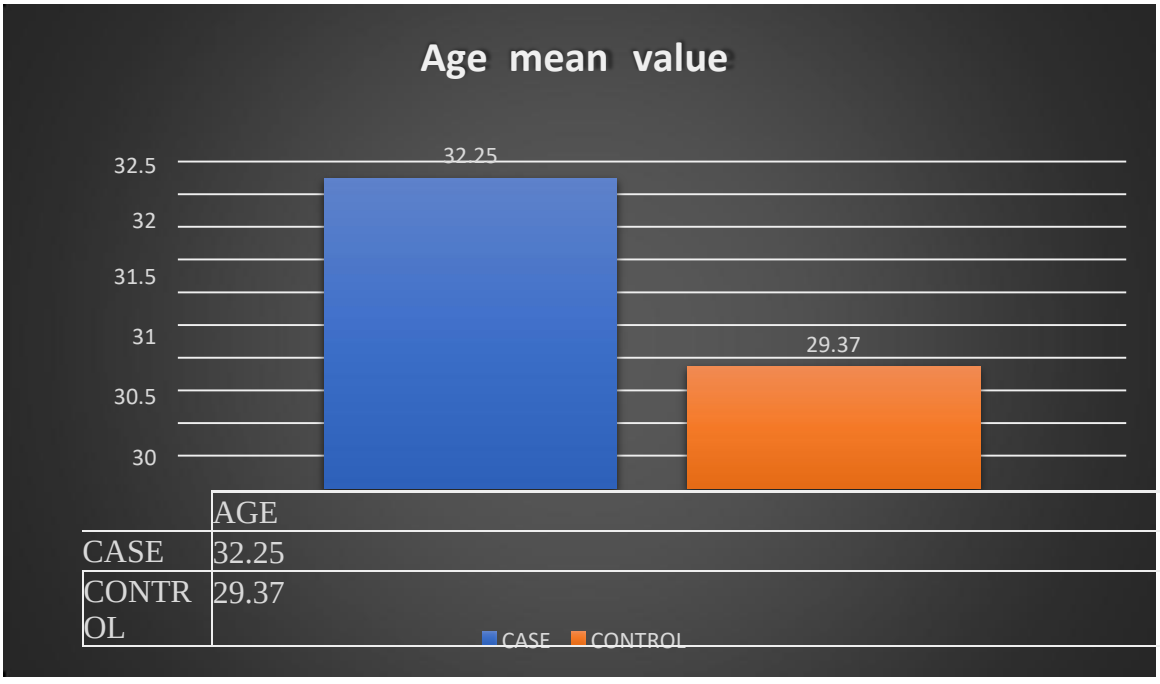
Presented with confirmed DVT, on anticoagulation with no other medical conditions.

No other comorbid conditions

Exclusion criteria:

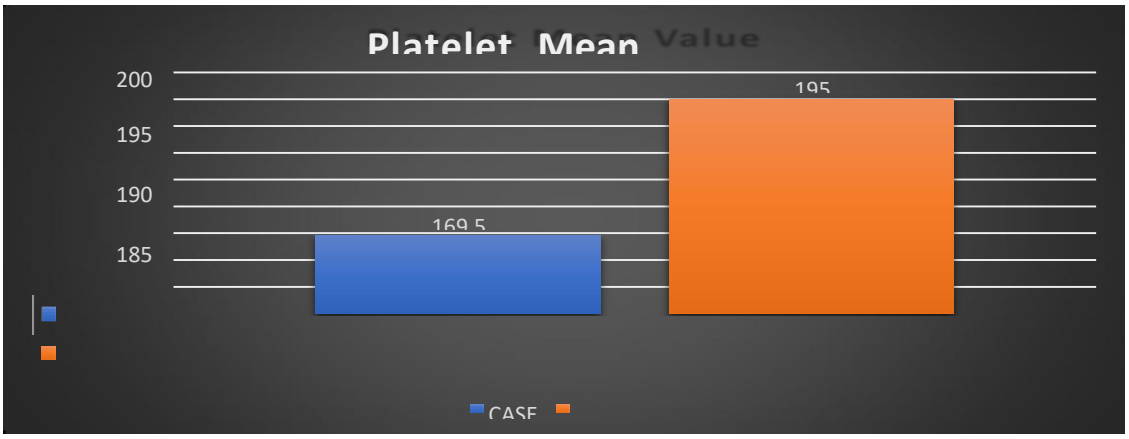
Pregnant females having a history of alcohol will be also excluded. Pregnant females with history of surgical procedure will be excluded**.**

RESULTS:



	Mean	**Standard Deviation**
Cases	**32.25**	**7.53**
control	**29.37**	**3.46**

Table 1: The mean age of cases was 32.25±7.35 years and 29.37±3.46 years in control. The mean age was comparable between both these groups.



155	Platelet count
CASE	169.5
CONTROL	195

	Mean	**Standard Deviation**
Case	**169.5**	**19.2**
Control	**195**	**20.3**

Table 2: The mean value of platelet count was 25.5x10^9/ l lesser in cases than in control group. standard Deviation was 1.1 lesser in cases than in control. Hence, Platelet count was decreased in female pregnant patients diagnosed with DVT.

DISCUSSION AND CONCLUSION

In this study, we compare the parameters of platelet count, activated partial thromboplastin time and international normalized ratio in pregnant females having DVT with those pregnant females which had not DVT. The result came out an important differences. The platelet count is found to be low in pregnant females with DVT and other parameters Prothrombin time, activated partial thromboplastin time were found to be high compared to case control and international normalized ratio was found to be similar in cases and control. The study also found that high proportion of pregnant females with DVT delivered their baby by C- sectioning. We, thus, emphasize the utility of moderate exercise, physical activity is beneficial for DVT patients for not to clot more blood and activity leads to unblock of thrombus inside the blood vessels. Routine medical check-up is also necessary for monitoring the hematologic parameters- platelet count, prothrombin time, activated partial thromboplastin time and international normalized ratio as in third trimester these parameters not lie in normal range. Use of multivitamins, Anticoagulant therapy, Low relative molecular mass heparins typically ar the primary line medications. medicinal drug medical aid may have to be continuing into the postnatal amount once the chance of DVT will increase.

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