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HIGH PREVALANCE OF PROCOAGULANTS IN CEREBRO VASCULAR ACCIEDENT PATIENTS

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Abstract:

Objectives: *The main purpose of this research is to know about the rates of different types of proteins, lack of the small molecules that inactivates several enzymes of the coagulation system known as anti-thrombin and FVL as a reason to initiate blood clots better known as thrombophilia in the participants having VTE and CVA.*

Methods: *This study was based on the observational research. This study was carried out in a Nishtar Hospital Multan. All the participants of the study referred for blood clotting disease were checked in this research in a period of four years. The participants having venous thromboembolism and cerebrovascular accident were checked for above mentioned values of different essential ingredients.*

Results: *Four hundred and four patients were the participants of this research. The age of the patients was from one year to seventy-one years. Males were greater than females in numbers. All these patients were found with the evidence of the blood clots. Fifty-four percent participants found with cerebrovascular accident, one hundred and sixteen patients presented with deep vein thrombosis, forty-two patients were suffering of pulmonary embolism and twenty-eight patients were suffering of portal vein thrombosis. The deficiency of protein was founded in thirty-five patients. Anti-thrombin deficiency (AT III) was found in nine participants and Factor V Leiden mutation was present in twenty-nine patients. The outcome of this research provided the complete link of mutation of FVL for promoting deep vein thrombosis, cerebrovascular accident and portal vein thrombosis PV. PE was developed by the deficiency of the proteins.*

Conclusion: *Factor V Leiden mutation and S and C Proteins are the main causes of the blood clots having close link with the promoting of deep vein thrombosis.*

Key Words: *blood clot, FVL, proteins, anti-thrombin deficiency, pulmonary embolism, thrombosis.*

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INTRODUCTION:

The inclination to start blood clots is known as Thrombophilia. The hinderers produced by nature to form lumps in a liquid like C & S proteins and AT III prevent the development of the forming semisolid lumps in a blood during the method of surgical procedure of hindrance in the blood flow known as haemostasis. Va and VIIIa are the factors mitigated by the both types of the proteins to hinder the development of the forming semisolid lumps in blood. An FVL mutation gene describes activate Protein C which is abbreviated as APC prevent aspect V usually coined as factor V Leiden [1]. Anti-thrombin deficiency develops multifaceted with thrombin which is enzyme that is the main cause of clotting. The low values of C & S proteins and anti-thrombin or the shortage of C & S proteins, AT III or the presence of factor V Leiden make susceptible the person to the individual to blood clots.

The inherited danger factor needs to be link with other acquired danger aspects to start the abnormality in most of the cases. When a member with susceptibility to a pathogen faces the medical treatment, which is linked with the blood clots, the danger of the formation of blood clots in veins boosts in the community [2]. The occurrence of the inherited blood clotting in communities' changes from point two percent to point four percent for the lack in protein C, point two percent for the lack in the protein S, point zero two percent for the for lack in the AT III and from four to five percent for the factor V Leiden mutation [3]. Blood clots selection for the dangerous aspects of the of gene is recommended in the sufferers with blockage of the blood veins, mainly in young lots or having the family background with the same disease. This study will give us knowledge about the different gene aspects which are link with the blood clotting.

METHODS:

This study was carried out in a Nishtar Hospital Multan. The patients having the tendency to develop thrombosis were selected from 2014 to 2017. The total numbers of patients were four hundred and four. The research was approved by the ethical board of the hospital and all the methods of the study were regulated according to the standards of the rules described by the declaration of the Helsinki which was renewed in 2000. Patients who were suffering of blockage in blood veins were the part of this research.

Deep vein thrombosis: discovered medical background and confirmation of hindrance in the blood flow with the help of ultrasound.

Pulmonary embolism: Discovered medical background and discovery of restriction in flow of blood from CT scan or angiography.

Cerebro-vascular accident: discovered medical background, brain symptoms Suggestive clinical history, neurological signs, and confirmation on computed tomography or MRI.

Portal vein thrombosis: discovered medical background and confirmation of occlusion of a blood vessel by an embolus that has broken away from a thrombus on CT scan or ultrasound. Sufferers who have recently lost their pregnancy or suffering of any disease of liver were not the part of this research.

Methods: Medical history background and blood models were collected for the medical examination of the C & S proteins, Anti-thrombin III and Factor V Leiden mutation. Selection for Factor V Leiden mutation by activated protein C hindrance was carried out according to the prescription of the doctor. Research for a protein in blood plasma that is the inactive precursor of thrombin and selection for the presence of an excessive amount of homocysteine in the blood was not carried out. ACA (automated coagulation analyser) was carried out with the help of a special kit to check the Anti-thrombin III [4]. AT Anti-thrombin III actions from seventy-five thousand one hundred and twenty-five were considered normal. SPSS nineteen software was used to check the validity of data and their rate of occurrence was presented through description and their importance was measured by the test of Kruskal Walli.

RESULTS:

Out of twenty-one hundred patients transferred four hundred and four patients were found the tendency to develop thrombosis which is known as blood clotting. Their age was from one year to seventy-one years. Seventy-one percent participants were the males and twenty-nine percent were females. More than seventy percent participants are having their first incidents. A large quantity of the patients had their medial aspects of the formation or presence of a blood clot in the blood veins depending upon an expression that relates to anatomy place of blockage in the blood veins; though three percent had the bleeding signs. Fifty-four percent patients were found with Cerebro-vascular accident, one hundred and fifty-nine were men and fifty-nine were the women. Twenty-nine percent patients were found with Deep vein thrombosis, seventy-four patients were men and forty-two patients were women. More than ten percent participants were found with pulmonary embolism, thirty-five patients were men and seven patients were females.

Table 1: Frequency of PC & PS, AT III deficiency & FVL in various disorders associated with hereditary thrombophilia

Disorder	PC & PS	AT III	FVL
CVA	12/218 (5.5%)	2/218 (1%)	5/94 (5%)
DVT	16/116 (14%)	3/116 (2.6%)	17/51 (33%)
PE	5/42 (12%)	1/42 (2.4%)	2/22 (9%)
PV	2/28 (7%)	3/28 (11%)	1/6 (17%)
Total	35/404 (8.7%)	9/404 (2%)	25/173 (14.5%)

DISCUSSION:

It is acknowledged reality that the tendency to develop blood clots due to an abnormality and its selection is diagnosed for the dangerous nature of the occurrence of this diseases [5]. During serious nature of period, the incorrect outcome of the selection of the patients can be the result. Mental, operational and molecular examination is important [6]. But in this research, the participants having blockage of a blood vein was the part of study and only the operational evaluation was chosen for this purpose. Proteins S &C shortage were eight-point five percent participants with five-point five percent in Cerebro-vascular accident, twelve percent in Pulmonary embolism, fourteen percent in deep vein thrombosis and seven percent in portal vein thrombosis [7]. Khalid performed a research in 2004 in the same area but his finding percentages were different from the outcomes of this research [8]. Jackson research was carried out on two lakh samples discovered the rate of protein C as thirteen points seven and seventeen point seven for the protein S. AT III shortage was discovered in the sufferers of Thrombophilia [9]. It was discovered one percent in the sufferers of cerebro-vascular accident, two-point four percent pulmonary embolism [10], two-point six percent in deep vein thrombosis and eleven percent portal vein thrombosis patients. There were different percentages discovered in the same research in different studies.

CONCLUSION:

The mutation of FLV, the shortage of the PC and PS are the essential reasons for the tendency to promote the blood clotting with a strong link with FLV in the promotion of developing deep vein thrombosis and Cerebro-vascular accident. The inclination for blood clots in the participants should be checked regardless their age. Vetting for FLV and other factors quantity should be the part of blood clot screen.

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