Essential Thrombocythemia (ET)

In the blood, there are three main types of blood cells: red blood cells, white blood cells, and platelets. These blood cells are produced in the bone marrow, and it is crucial for their numbers to be within a certain range—not too high, not too low. Normally, the platelet count ranges from around 150,000 to 400,000 platelets per milliliter of blood. However, individuals with ET have abnormally high platelet counts. This condition occurs when cells called megakaryocytes in the bone marrow produce too many platelets.

ET typically affects adults aged 50 to 60 years. Approximately 60% of ET cases are caused by mutations in genes such as JAK-2, CAL-R, or MPL. In the remaining cases, the exact cause is often unclear. Although ET patients have an excessive number of platelets, they may not function properly, leading to potential bleeding issues.

Some ET patients experience no symptoms due to high platelet counts. However, when platelet levels are significantly elevated, blood clots can form in various blood vessels. Blood clots in blood vessels of heart may lead to heart attacks, while clots in blood vessels of brain can result in strokes or paralysis. Some patients may report a burning pain in their hands. Often, ET is detected incidentally during routine blood tests for other reasons.

Since there are other causes of high platelet counts, various tests are necessary to confirm the diagnosis of ET. Bone marrow examination typically shows an increased number of megakaryocytes. Chromosomal studies and genetic testing for JAK-2 and other genes also aid in diagnosis.

Although ET is categorized as a type of cancer, the chance of dying from it is very low. People with ET can lead normal lives without significant differences compared to individuals without the disease. However, in some cases, the spleen may enlarge in these patients which may be removed by doing surgery. When this is done, the platelet count reaches a dangerous level, which could potentially be fatal.

It is essential for all ET patients to take care of their heart's health. This involves quitting smoking and limiting alcohol consumption. Maintaining a healthy weight and engaging in regular exercise are also crucial. If necessary, blood pressure and cholesterol medications should be taken. Aspirin is often recommended for everyone with ET, as it inhibits platelets and helps prevent blood clotting. In cases with high risk features, medications like Hydroxyurea may be given to reduce the platelet count. The goal is to bring the platelet count below six lakh (600,000/cmm) by adjusting the medication dosage every two to three months based on the platelet count. Patients with ET undergoing surgery must receive Heparin

injections to prevent blood clots in blood vessels post-surgery.

Taking Hydroxyurea can lead to darkening of nails and skin, which is not a cause for concern. Higher doses of this medication can lower white blood cell counts. In rare instances, leg ulcers may develop. If the side effects of Hydroxyurea become too troublesome, the medication may need to be discontinued.

People with ET do not require any specific diet. Those taking Hydroxyurea should take appropriate precautions to avoid pregnancy, as this medicine causes serious ill effects on growing fetus.

ET is unlikely to be hereditary, and it is not transmitted from person to person.

For any information about ET disease beyond what is provided here or if you experience any adverse effects of treatment, it is essential to consult your treating physician promptly. This will help ensure you receive proper treatment and care.

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