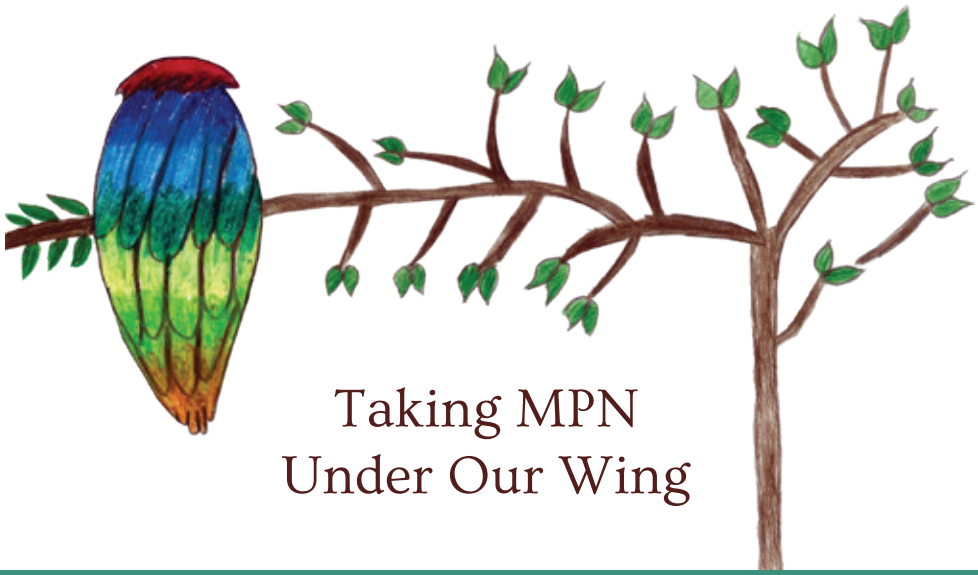
FOM Guide to Disease Management



FAQ on
Essential Thrombocytosis

The Max Foundation

Friends of Max

FAQ

on

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Editor's Note

Dear Readers,

This is the second booklet under the series of MPNs (Myeloproliferative neoplasms) which addresses common questions on a disorder termed "Essential thrombocytosis".

We commonly come across a viral infection called “Dengue”, especially during monsoon season. Consequent to this, “Platelets” have gained a lot of popularity. Platelets are tiny blood cells in our body that help to stop bleeding by forming a plug at the site of damage. Low platelets are commonly encountered in infections like Malaria and Dengue. However, there is the other extreme which is also important. "Essential thrombocytosis" is one such paradoxical extreme when platelets are high for a prolonged period, which increases the risk of unwanted clots in the body. After all - "Excess of anything is bad" and certainly not good for health.

I am grateful to Friends of Max who have taken great efforts in compiling this booklet. I am sure this will be a boon for our patients and help them understand how to better manage their condition.

- *Dr. Sumeet P. Mirgh*
Associate Professor,
Adult Hematolymphoid & BMT,
Tata Memorial Centre, ACTREC
Mumbai

FAQ

What is Essential Thrombocytosis (ET)?

Our body has a factory for producing cells which is called “bone marrow”. In this bone marrow, there are parent cells called “megakaryocytes” which produce platelets. In Thrombocytosis or Thrombocythemia, there is mainly an overproduction of these platelet-forming cells, called “megakaryocytes,” in the marrow. This results in the release of too many platelets into the blood.

What are platelets?

Platelets are small blood cells in the body that form clots to prevent or minimize bleeding. The platelet’s function is to start the process of forming a plug (clot) in response to a blood vessel injury.

What is Thrombocytosis?

Another word for platelet is “thrombocyte”. The term “Thrombocytosis” means an excess of platelet count in the blood caused by another disease or condition.

What are the common causes of increased platelets in our blood?

Normal platelet count is between 1.5 to 4.5 lacs. Increased platelets mean more than 4.5 lacs in the blood. Common causes of increased platelets include infections, injury, conditions like post major surgery or cancers. Excess platelets can cause complications like stroke, heart attacks or a clot formation in the blood vessels. Rarely, increased platelet counts are an indication of Essential Thrombocytosis (ET) which is a slow growing blood cancer.

FAQ

Is ET a blood cancer?

Yes, it is a slow-growing blood cancer.

Why does ET occur OR What causes Thrombocytosis?

A mutation of the protein JAK2 (Janus Kinase 2) occurs impacting its normal functions preventing it from working the way it should. This abnormal protein affects the parent cells in the bone marrow from which platelets are continuously produced (even when they are not required). The excess of platelets causes problems in the body. In rare instances, mutation of other proteins called MPL or CALR (Calreticulin) may also cause the same phenomenon. There are no other known risk factors (like diet or lifestyle habits) implicated in causing Thrombocytosis.

Is Thrombocytosis a genetic disorder?

While thrombocytosis happens due to mutation of the proteins like JAK2, these are usually not inherited. Usually, these proteins are not commonly passed on to your children.

Why are increased platelets harmful?

Normally after injury, platelets prevent blood loss by forming a clot at the site of the injury. Increased platelet counts can cause unexpected clots in vital organs like heart and brain which can be serious. On rare occasions, when platelet counts are extremely high (above 15 lacs and due to abnormal functioning of platelets) this can paradoxically lead to excessive bleeding.

What are the symptoms in Thrombocytosis?

Many patients with Thrombocytosis do not have any symptoms. Symptoms one may present with:

1. Burning pain in the feet or hands, sometimes worsened by heat or exercise or when the legs are resting in a suspended position for long periods. The skin of the legs and hands may have a patchy reddish colour.
2. Headache, dizziness, weakness or numbness on one side of the body, difficulty in speaking - these are signs of inadequate flow of blood to the brain.
3. Abnormal clotting, which can happen in the heart vessels causing chest pain, sweating, dizziness.
4. Fullness in left upper side of stomach due to an enlarged spleen.

Symptoms like fatigue, weakness, itching, sweating and low-grade fevers, may present in advanced cases.

How does one diagnose Thrombocytosis?

The normal platelet count is between 1.5 to 4.5 lacs. If the platelet count remains over 4.5 lacs for many months or over a prolonged period of time, your doctor may advise checking for the presence of abnormal proteins (JAK2, MPL, CALR) in your blood. It is possible your doctor may also advise you to get a bone marrow test done during diagnosis.

What is a bone marrow investigation?

As per your doctor's decision and discretion, you may need to undergo a test called a bone marrow biopsy during diagnosis. The results of this investigation can show your doctor if your bone marrow is producing excess blood cells. To complete this investigation, your doctor will take samples of your bone marrow, usually from the back of your hip bone.

You will be made to lie down on an examination table and be given a shot of local anaesthesia that will numb the area. Then, your doctor will use a needle to take out a small amount of bone marrow from the site that has been numbed. It is an outpatient procedure, which means you don't have to stay overnight in a hospital. You can get it done in a clinic, a hospital, or your doctor's office.

Will Thrombocytosis shorten my life expectancy?

Thrombocytosis does not generally shorten life expectancy. However, medical supervision is important to prevent or treat thrombosis, a serious complication that can affect vital organs such as the brain or the heart.

What are the treatment options for Thrombocytosis?

A haematologist or oncologist can recommend specific treatment and management of the condition for a patient with Thrombocytosis. Depending on your history and level of risk, your doctor will advise only regular check-ups (no medication) or blood thinners to decrease the risk of clot formation. At other times, your doctor may advise certain medication to lower the platelet count.

Is Essential Thrombocytosis a curable blood cancer?

Like Polycythaemia Vera (PV), Essential Thrombocytosis is also an incurable blood cancer. However, just like diabetes and hypertension, it can be controlled and managed well with medication.

Are there any dietary restrictions for a patient of Thrombocytosis?

Generally, no, there are no restrictions. However, if on medication for control of hypertension, diabetes or high cholesterol levels, the basic dietary restrictions for the above disorders should be followed. Smokers should quit smoking as tobacco can increase the risk of blood clots. Regular exercise can also help in decreasing the risk of blood clots.

Are there any emergency complications which a patient diagnosed with Thrombocytosis should be aware of?

Visit your nearest hospital immediately if you notice any of the following -

- Sudden numbness or weakness in face, arms, or legs
- Sudden difficulty in speaking
- Sudden pain in the chest
- Sudden dizziness or loss of balance
- Sudden severe headache

These could be symptoms of a clot in vital organs of your body, which need immediate attention.

Acknowledgement

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Notes

Notes

Together we share & learn

Friends of Max

Secom Business Centre, A Block Basement, Shiv Sagar Estate,
Dr A B Road, Worli, Mumbai - 400018

www.friendsofmax.info | friendsofmax@gmail.com
Contact: (+91) 8291203943