# Chronic Immune Thrombocytopenia

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## Background

Immune thrombocytopenia (ITP) is an autoimmune disorder with a combination of defective platelet production, enhanced clearance leading to thrombocytopenia and increased rates of venous and arterial thrombotic events. The patient develops the typical small sized platelets (Figure 1, and 2).

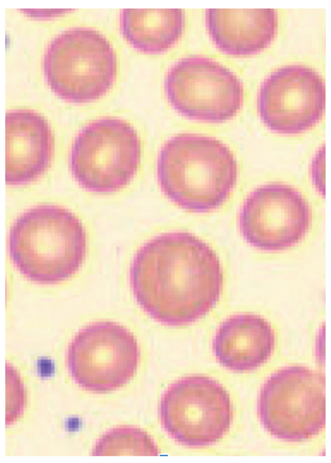

Figure 1: Thrombocytes and RBCs in a normal person: note the thrombocytes are very tiny compared to erythrocytes

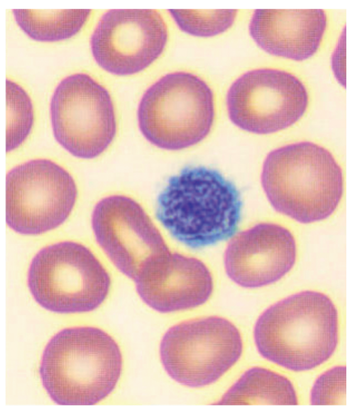

Figure 2: Thrombocytes in ITP: Note that the thrombocyte is as large as the erythrocytes.

## Incidence of ITP

The annual incidence of pediatric ITP is estimated to be between 1 and 6.4 cases per 100,000 people.

- It can occur at any age, but peak incidence occurs at ages 2-5 and adolescence.
- The annual incidence of adult ITP is estimated to be between 1 and 6 cases per 100,000 people.
  - Since the condition is more of a chronic disease in adults, the prevalence of ITP is almost 12 in 100,000 cases.
  - The peak incidence for adults occurs at around 60 years old.

## Methods

We present a case with a H/O ITP and recurrent PEs and the published literature on ITP.

## The Case

- 72 y F, H/O ITP, and recurrent PEs
- ITP DX in 2014 with severe bruising, with a platelet count of 10.
- Work on causes was negative.
- Steroids increased the platelets. For the next several years, she stopped steroids.
- Six years later, presented with two weeks of hemorrhoidal bleeding and colonic polyps, platelet count of 15.
- A short course of steroids resulted in a platelet count of 40.
- A few months later, she came in with left-sided upper abdominal pain with PE, with platelets of 20 (Figure 3).
- Therapy with steroids and Lovenox followed by apixaban.
- D/C medications presented with SOB, leg swelling, MI, new DVT, and PE, with a platelet count of 15.

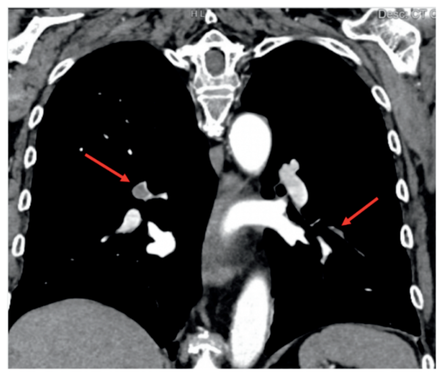

Figure 3: The patient with PE following ITP

## Symptoms

- Bruising
- Nosebleeds
- Bleeding in gums
- Fatigue
- Heavy menstrual periods
- PE

## Lifestyle Impacts

- Low energy levels/fatigue
- Brain fog (eg, memory and concentration issues)
- Anxiety about the condition
- Poor Quality of Life
- People with ITP have higher levels of inflammation

## Long Term Risks

- Small bleeds (microbleeds) in the brain and body
- Risk of blood clots
- Frequent infections

## Impact of Low Platelets

- Easy or unexplained bruising
- Red or purple dots on arms and legs (petechiae)
- Nosebleeds
- Bleeding gums
- Heavy menstruation in women

## Discussion/Treatment

The incidence of ITP is very low, almost equal in both genders. Bleeding is the most feared complication. Patients with ITP are at increased risk of venous and arterial thrombotic events. The first line of treatment is steroids with and without Rituxan. Intravenous gammaglobulin and thrombopoietin receptor agonists can also be given, fostamatinib was recently approved by the FDA. In refractory cases, splenectomy can be performed.

## Conclusion

ITP is a rare, serious autoimmune condition affecting both genders, predisposing to bleeding with thrombosis as a rare complication of ITP. ITP is managed with steroids, Rituxan, Intravenous gammaglobulin, and thrombopoietin receptor agonists. Patients should be advised not to stop medications. Our message is that there is a close and significant connection between ITP and thrombosis.

## References

1. Doobaree IU, Nandigam R, Bennett D, et al.: Thromboembolism in adults with primary immune thrombocytopenia: a systematic literature review and meta-analysis, Eur J Haematol, 97:321–330, 2016.
2. Ekstrand C, Linder M, Baricault B, et al.: Impact of risk factors on the occurrence of arterial thrombosis and venous thromboembolism in adults with primary immune thrombocytopenia - Results from two nationwide cohorts, Thromb Res, 178:124–131, 2019.