

Reshaping the Management of Reactive Thrombocytosis Post Splenectomy

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Objective

To describe the post-operative medication management of thrombocytosis post splenectomy.

Clinical Features

65-year-old male admitted for elective pancreaticoduodenectomy.

Past medical history

- Duodenal metastases secondary to renal carcinoma
- Hypoadrenalism
- Hypertension
- Nephrectomy
- Adrenalectomy
- Splenectomy (2019)

Relevant medications on admission

Aspirin 100 mg daily (since 2019)

Reactive Thrombocytosis

Reactive thrombocytosis is characterised by increased platelet count of $> 450 \times 10^9/L$ due to underlying conditions, medications or events¹.

The most common causes of reactive thrombocytosis include anaemia or blood loss, infection, non infectious inflammation or splenectomy¹.

Mechanisms of increased platelet count include increased megakaryocyte proliferation and maturation, accelerated platelet release or reduced platelet turnover¹.

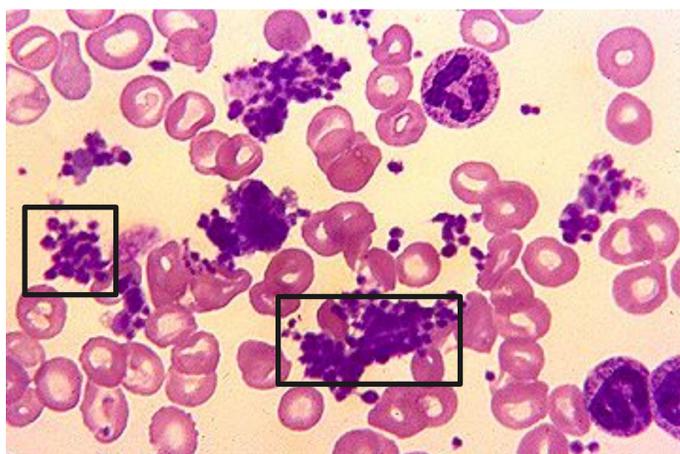


Figure 1: A blood smear of thrombocytosis shows increased platelet number and aggregation¹

In practice, aspirin for reactive thrombocytosis post splenectomy has been used when platelets $> 1000 \times 10^9/L$ ¹. Aspirin inhibits platelet aggregation, therefore its use for reactive thrombocytosis could be clinically justified.

However, current treatment guidelines recommend *against* the use of aspirin for reactive thrombocytosis regardless of platelet count, as there is no *conclusive* evidence of efficacy¹.

Inpatient timeline

Admission

Medication history performed in ICU post pancreaticoduodenectomy

Reconciliation

Pharmacist noted no clear indication for aspirin and patient unaware of indication

Rediscovery

Following extensive investigation, the indication for aspirin was found to be *treatment of reactive thrombocytosis post splenectomy*

Intervention

Recommended to deprescribe aspirin due to the lack of efficacy or any ongoing indication (platelet count = 385)

Outcome

Aspirin deprescribed

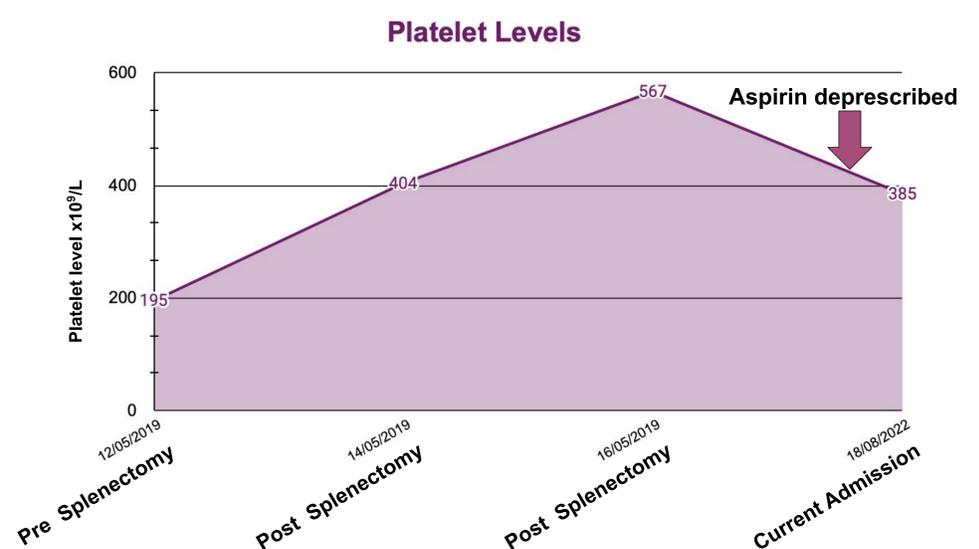


Figure 2: Perioperative Platelet Levels

Discussion

This case demonstrates the important role pharmacists play in thorough history gathering, assessment of current evidence and discussions for ongoing medication management.

Deprescribing is an important skill for all pharmacists and should always be considered, even in critical care environments.

References

1. Tefferi, Ayalew, et al. "Approach to the Patient with Thrombocytosis." *UpToDate*, Wolters Kluwer, 19 Aug. 2022.
2. "Aspirin (Antiplatelet)." *Australian Medicines Handbook*, July 2022.