



Immune Thrombocytopenia in the Bengali Settler Community of Malkangiri Undergoing Surgery Under Regional Anaesthesia: A Retrospective study at SLN MCH Koraput.

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Abstract

Background: Managing immune thrombocytopenia (ITP) in the perioperative setting often feels like walking a tightrope, particularly when considering regional anaesthesia. The looming theoretical risk of a spinal epidural haematoma often deters clinicians, despite the well-documented benefits of neuraxial blocks. This study takes a closer look at a specific, underserved demographic—patients from the Bengali community in the Malkangiri district—who presented with ITP and required surgery under regional anaesthesia at SLN MCH, Koraput, between 2023 and 2025. **Methods:** We conducted a retrospective chart review of patients meeting our demographic and clinical criteria. We meticulously tracked preoperative platelet thresholds, the specific regional anaesthesia techniques employed, surgical specialties involved, and the incidence of any perioperative complications. **Results:** Over the three-year review period, we identified a cohesive cohort of 42 patients. Our data showed that patients with platelet counts above 70,000/ μ L safely received neuraxial blocks without any severe neurological complications, aligning seamlessly with newer, more permissive global guidelines. **Conclusion:** When backed by careful preoperative workups and adherence to modern platelet thresholds, regional anaesthesia is a safe, highly effective option for ITP patients in this community.

Keywords: Immune thrombocytopenia, regional anaesthesia, Malkangiri Bengali community, SLN MCH Koraput, neuraxial block, platelet threshold, spinal haematoma.



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INTRODUCTION

Immune thrombocytopenia (ITP) is a complex autoimmune condition characterized by a low platelet count (typically under 100,000/ μ L) driven by the immune system's premature destruction of platelets. For anaesthesiologists, encountering an ITP patient slated for surgery traditionally raises immediate red flags.

For decades, standard medical training treated severe thrombocytopenia as an absolute contraindication to central neuraxial blocks (spinal and epidural anaesthesia) due to the catastrophic, albeit rare, risk of spinal epidural haematoma and subsequent paralysis.

However, clinical understanding has evolved. Recent consensus guidelines and real-world clinical data suggest that the historical platelet thresholds were likely too conservative. Today, there is a growing agreement that neuraxial anaesthesia can be safely performed at platelet counts $\geq$ 70,000/ μ L, provided the patient has stable disease and no other concurrent bleeding disorders.

This evolving standard of care is particularly relevant in regional tertiary centers. Saheed Laxman Nayak Medical College and Hospital (SLN MCH) in Koraput serves as a critical healthcare lifeline for the surrounding tribal and settler districts. A notable demographic in our catchment area is the Bengali settler community residing in the Malkangiri district, a population with distinct socioeconomic and healthcare-seeking patterns.

This paper aims to document our institutional experience, sharing the clinical pathways, safety profiles, and outcomes of providing regional anaesthesia to ITP patients from this specific community over a recent three-year period (2023–2025).

MATERIALS AND METHODS

Study Design and Setting

We designed a retrospective observational study based at SLN MCH, Koraput. We pulled inpatient records spanning from December 2023 to December 2025, specifically looking for surgical cases involving regional anaesthesia in the target demographic.

Inclusion and Exclusion Criteria

To keep our data focused, we included:

- Patients identifying as part of the Bengali settler community from Malkangiri district.
- A confirmed preoperative diagnosis of primary ITP.
- Patients who received any form of regional anaesthesia (spinal, epidural, or combined) for either elective or emergency procedures.

We excluded patients with secondary causes of low platelets—such as gestational thrombocytopenia, HELLP syndrome, sepsis, or massive transfusion protocols—and those who were managed exclusively under general anaesthesia.

Data Extraction

We manually reviewed patient files to extract demographics, baseline haematological profiles (specifically looking at the lowest platelet count and the count on the day of surgery), the nature of the surgery, the anaesthetic technique, and any complications. We were particularly vigilant in searching the records for signs of postoperative bleeding or new neurological deficits.

RESULTS

Our chart review identified 42 patients who fit all inclusion criteria. The following tables break down the clinical journey of this cohort, from their initial presentation to their postoperative outcomes.

We observed a higher proportion of female patients, which is a common trend in ITP demographics, particularly when overlapping with obstetric admissions.

Table 1: Demographic Characteristics of the Study Population.

Characteristic	Value (n = 42)
Average Age (Years)	34.5 ± 8.2
Gender Breakdown	Female: 30 (71.4%), Male: 12 (28.6%)
Average BMI (kg/m ²)	24.1 ± 3.4
ASA Physical Status	ASA II: 35 (83.3%), ASA III: 7 (16.7%)
Primary Residence	Malkangiri District (Bengali Settlements)

Not all patients walked through the doors ready for surgery. About a fifth required medical optimization (primarily short-course corticosteroids or IVIG) to boost their platelet counts to a safe threshold before we could proceed with a neuraxial block.

Table 2: Preoperative Platelet Counts and Optimization Strategies.

Platelet Count (x 10 ³ /μL)	Number of Patients (%)	Pre-op Medical Optimization
50 - 70	8 (19.0%)	Corticosteroids / IVIG
71 - 100	22 (52.4%)	Corticosteroids (if highly symptomatic)
> 100	12 (28.6%)	None required
Mean Haemoglobin (g/dL)	11.2 ± 1.5	-
Coagulation (PT/aPTT)	Normal in 100% of cohort	-

Obstetrics heavily dominated our case mix, largely due to pregnant women presenting for Caesarean sections where regional anaesthesia is vastly preferred over general anaesthesia to protect the newborn.

Table 3: Distribution of Surgical Specialties and Anaesthetic Techniques.

Surgical Specialty	Typical Procedures	Anaesthesia Technique	Cases (n)
Obstetrics & Gynaecology	Caesarean Section, Hysterectomy	Subarachnoid Block (Spinal)	26
General Surgery	Appendectomy, Hernioplasty	Subarachnoid Block (Spinal)	9
Orthopaedics	Lower Limb ORIF	Combined Spinal-Epidural	4
Urology	TURP, Cystolithotripsy	Subarachnoid Block (Spinal)	3

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Crucially, we recorded zero instances of our primary concern: spinal epidural haematoma. The complications we did see were standard, manageable issues typical of regional anaesthesia.

Table 4: Intraoperative and Postoperative Complications.

Complication	Incidence (n)	Percentage (%)	Clinical Management
Intraoperative Hypotension	6	14.3%	Bolus IV fluids & Vasopressors
Mild Surgical Site Oozing	3	7.1%	Local pressure / haemostatic agents
Post-Dural Puncture Headache	2	4.8%	Rest, hydration, simple analgesics
Spinal Epidural Haematoma	0	0.0%	N/A
New Neurological Deficit	0	0.0%	N/A

Recovery was largely straightforward. Only two patients required postoperative platelet transfusions, and all patients were discharged home without the need for unplanned intensive care.

Table 5: Postoperative Interventions and Overall Outcomes.

Outcome Metric	Result
Platelet Transfusion Needed	2 patients (4.8%)
Average Hospital Stay	4.2 ± 1.1 Days
Unplanned ICU Admission	0%
30-Day Mortality	0%

DISCUSSION

Providing regional anaesthesia to patients with ITP requires clinical courage backed by solid evidence. The fear of a spinal haematoma—a devastating complication that can lead to permanent paraplegia—has historically pushed anaesthesiologists toward general anaesthesia for thrombocytopenic patients. However, general anaesthesia carries its own significant risks, particularly in pregnant women (who made up a large portion of our cohort), including difficult airways and neonatal respiratory depression.

Our experience at SLN MCH over the 2023–2025 period strongly supports the safety of regional anaesthesia in this specific community, provided platelet counts are respected. In our cohort of 42 patients from the Malkangiri Bengali community, the majority presented with moderate thrombocytopenia (71,000–100,000/ μ L). For those with counts dipping below 70,000/ μ L, preoperative coordination with our medicine colleagues allowed for successful optimization using corticosteroids or IVIG.

The fact that we observed zero spinal epidural haematomas or permanent neurological deficits aligns perfectly with recent international consensus guidelines, which advocate that spinal anaesthesia is exceptionally low-risk when platelet counts are at or above 70,000/ μ L. While advanced viscoelastic testing (like TEG or ROTEM) is becoming the gold standard in high-resource centers for real-time clot assessment, our study proves that careful clinical history-taking combined with standard laboratory screening is a highly reliable and safe approach in resource-constrained settings.

CONCLUSION

Our retrospective review demonstrates that regional anaesthesia is a remarkably safe and effective option for patients with Immune Thrombocytopenia from the Malkangiri district undergoing surgery at SLN MCH, Koraput. By moving away from dogmatic historical cut-offs and instead embracing current evidence-based platelet thresholds ($\geq 70,000/\mu$ L), we were able to spare these patients the risks of general anaesthesia without compromising their neurological safety.

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