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Title: The Grey Area - (A rare case report of pregnancy complicated by Grey platelet syndrome)

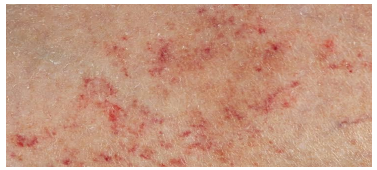
INTRODUCTION - Grey platelet syndrome is a rare inherited platelet disorder characterized by **thrombocytopenia** and large **dysfunctional platelets** with a specific **absence of α-granules**, resulting in the grey appearance on a Wright-stained peripheral blood smear.

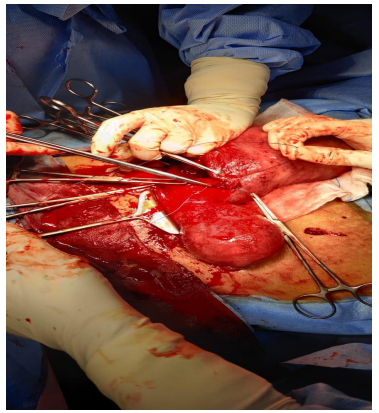
OBJECTIVE - In this rare case report, we describe the course of pregnancy and delivery in a patient with grey platelet syndrome.

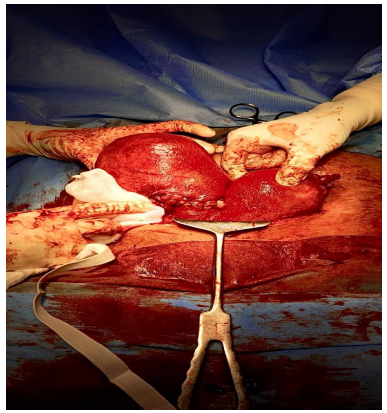
PROCEDURE- Mrs. X, 25 years, outside booked, **primigravida**, GA - **38 weeks + 1 day**, presented with complaints of **gingival bleeding** and **epistaxis**. On examination, numerous **petechiae** noted in bilateral lower limbs. On admission, Plt - **8,000**/cumm, peripheral smear showed giant platelets with absence of α-granules, **diagnosis of Grey platelet syndrome** made. Patient was started on **intravenous corticosteroids** and **multiple platelet transfusions** done. Serial platelets monitoring was done. She had spontaneous onset of labour. Fetal ultrasound revealed **Breech** presentation. Patient underwent **Emergency Lower Segment Cesarean section** with a pre-operative platelet count of **52,000**/cumm under **General Anaesthesia**. Intraoperatively, **Bicornuate uterus** was noted with pregnancy in right horn.

Fetal **cord blood** taken. **Moderate atonic PPH** noted and was managed medically. Post operative Plt - **21,000**/cumm, multiple **platelet transfusions** done. Intraperitoneal drain removed. Neonatologists noted mild to moderate **thrombocytopenia in the baby**. Patient was discharged after **tapering to oral steroids** with a platelet count of **60,000**/cumm.

DISCUSSION - According to **RCOG** guidelines, patients with a bleeding history should be given a **platelet transfusion prophylactically** at or before delivery. Platelets should be **HLA matched**.







Tranexamic acid should be given at the onset of labour and continued throughout postpartum. **Central neuraxial anesthesia** should be **avoided**. According to **NICE** guidelines, If platelet count is **< 50,000**/ cumm **avoid regional anaesthesia**.

CONCLUSION- **Fetal blood sampling** and **ventouse** should **not be used**. **Mid-cavity** or **rotational forceps** can be used, but **with caution**. Baby's platelet counts should be measured through **cord blood**. **Active management of third stage** of labour should be done. Uterotonics **should not be given** through the **Intramuscular route**. **Thrombopoietin receptor agonists** (TPO-RAs) like **Romiplostim, Eltrombopag & Avatrombopag** are approved for the treatment of chronic ITP in adults. Their use in pregnancy is labeled as **category C - FDA** due to lack of clinical trials.

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