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Case Report

Case Report: Successful Vaginal Birth of a Parturient with Thrombotic Thrombocytopenic Purpura

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Received: April 30, 2025; **Published:** May 21, 2025

Abstract

30-year-old woman followed for thrombotic thrombocytopenic purpura which appeared during her pregnancy. The woman was admitted to the emergency room in labor with thrombocytopenia at 52,000/mm^3. The birth was performed vaginally of a newborn weighing 4055 g. Postpartum follow-up was without incident.

Keywords: *Thrombotic Thrombocytopenic Purpura; Thrombocytopenia; Pregnancy; Childbirth*

Introduction

Thrombotic thrombocytopenic purpura (TTP) is diagnosed by a combination of fever, thrombocytopenia, microangiopathic hemolytic anemia, kidney disorder, neurologic symptoms [1,2]. Pregnancy is known to be a trigger for TTP [2]. The feared complication in pregnancy with TTP is preeclampsia (PE) [2,3].

Currently, the therapeutic alternatives are multiple and include (plasma exchange, plasma transfusion, glucocorticoids, cyclophosphamide) [1].

We will report a case of a parturient followed for TTP on pregnancy admitted to the gyneco-obstetric emergency department of the Mohamed VI university hospital in Marrakech for childbirth.

Case Report

This was a 30-year-old woman from and living in Ouarzazate 4Gravidity 4Parity 3 Living Child/Vaginal birth (VB), followed at Ouarzazate's hospital for TTP 3 months ago on pregnancy and put on glucocorticoids (CTC). The parturient presented to the obstetric and gynecological emergency department in labor with a pregnancy at 38 weeks of amenorrhea (WA) + 5 days (according to first trimester ultrasound) with isolated thrombocytopenia at 34,000/mm.

The clinical examination on admission:

- Blood pressure (BP) = 120/70 mmhg; Negative proteinuria on the test strip; no edema of the lower limbs, neuro-sensory signs (NSS) negative, osteotendinous reflexes (OTR) normal, Glasgow Coma Score= 15/15.
- Uterine height (UH) = 30 cm; positive uterine contraction (UC); fetal heart sounds (FHS) are clinically positive.
- Cervical examination: Cervix admits 1 finger, membranes intact, Mobile cephalic presentation, Clinical pelvimetry is normal
- No hemorrhagic syndrome and no fever were noticed.

After her admission, she benefited from:

1. Tracing of the fetal heart rate: Basal rate at 143 bpm; variability at 7 bpm; Reactive; No deceleration.
2. Biological assessment comprising: A blood count (Hb = 12,6 g/dl; Pq = 52.103/mm^3; WBC=10,12.103/µl)

- Grouping with Rhesus: A+
- Hemostasis assessment (TP = 99,1%; TCA = 25,5 sec)
- Biochemical assessment (Urea = 0.21 g/l)
- Creatinine = 5.8 mg/dl; ALAT = 9U/l; ASAT = 16 U/l; Uric acid = 57 mg/l; LDH = 319 U/l).

3. Obstetric ultrasound: Evolutive monofetal pregnancy; Cephalic presentation; Amniotic fluid in normal quantity; Fundal placenta; Estimated fetal weight = 3850g.

Opinion of the hematologist: Put the patient on;

- Injectable dexamethasone 40 mg/day or orally if not possible for 4 days with control A blood count on the fifth day.
- Human Immunoglobulin (Ig) 1g/kg on the first and the third day.
- In case of non response to dexamethasone and Ig: Transfusion of platelet units.
- Opinion of the anesthetist: No spinal anesthesia possible if decision of cesarean section.
- Need to reserve 10 platelet units at least, ready to use if hemorrhagic delivery.
- Bolus of solumedrol 120 mg directly intravenous (DIV) if no dexamethasone.

During her hospitalization in the delivery room, the parturient benefited from an amniotomy to allow better contact between the cervix and the presentation as well as a release of endogenous prostaglandins so that the labor evolve to the active phase without incident with close surveillance of BP, NSS, OTR for risk of occurrence of PE, in addition to continuously monitoring the fetal heart rate, UC, evolution of cervical dilation, descent of the presentation, amniotic fluid state and bleeding.

From the start of the active phase of labor, a preparation made of a 5 IU of oxytocin (Syntocinon) in 500 ml of GS 5% was prepared for the parturient and a low dose protocol of 1 to 2 mIU/ml of oxytocin were initiated. No incidents were noted after oxytocin administration.

Finally, an assisted vaginal birth (AVB) was performed without any instrument, resulting in the birth of a female newborn, Apgar score 10/10, birth weight = 4055g.

10 IU of oxytocin was DIV to the parturient after the anterior shoulder delivery. 15 minutes after childbirth, a delivery's active management was performed without incident after controlling cord traction, the delivery product was macroscopically normal and complete. After delivery, 20 IU of oxytocin with 1g of tranexamic acid (Exacyl) was administered by infusion in 500 ml of 5% GS to the parturient.

The patient was hospitalized after childbirth for postpartum monitoring, during which no mainly hemorrhagic incident was noted in the mother.

The patient was referred to the hematology department for follow-up of her disease with a postpartum medical prescription including antibiotic prophylaxis, oral contraception, iron supplement and a hygiene product. Currently, the woman is followed by the medical team of Ouarzazate's hospital, she reported a clinical and biological improvement, and her daughter is also in good health.

Discussion

TTP is caused by a deficiency of the von Willebrand factor (vwf) cleavage protein which leads to the persistence of the vwf thrombotic multimer resulting in organ ischemia [1]. TTP manifests with neurological symptoms, kidney damage, fever, thrombocytopenia and microangiopathic hemolytic anemia [1]. The 5 signs are rarely complete [1,2]. Secondary TTP refers to microangiopathic hemolytic anemia associated with vasculitis, infection, drugs or pregnancy [1]. Pregnancy is known to be an inducing factor in 10 to 25% of cases [2,3].

Our parturient was diagnosed early and put on treatment with supervision at Ouarzazate's hospital, which prevented the occurrence of complications such as PE. PE on TTP is explained by the formation of placental micro-occlusion leading to a placental infarction responsible for intrauterine growth restriction [3,4]; this was not the case in our parturient whose clinical examination, biological assessment, examination of the delivery product were unremarkable with a birth weight of 4055g.

Study	Age (Years)	Parity	Gestational Age (SA)	Delivery method	Antenatal treatment	Birth weight (g)
M Davies., *et al*.	31	1	38 SA + 2 j	AVB	Ig en IV Plasma exchange CTC	3050
S Meti., *et al*.	24	1	34 SA	Cesarean for transverse presentation in labor	Plasma transfusion Plasma exchange Aspirine CTC	Not mentioned
T Koyama., *et al*.	29	1	32 SA + 3 j	Cesarean for fetal hypoxia	Plasmapheresis Platelet transfusion	948
Chraibi H., *et al*.	30	4	38 SA+ 5 j	AVB	CTC	4055

Table 1: *Table summarizing the cases found in the literature of pregnancy in parturient affected by TTP.*

Diagnosis with early management allow to have a healthy parturient with a healthy newborn.

AVB with monitoring of the elements of the partogram prevented complications related to the disease; Cesarean section remains reserved for formal indications because of the bleeding associated with it contrary to what Davis., *et al*. reported in their article [2].

The non transfusion of platelet helped prevent maternal-fetal morbidity and mortality [2]; in our case, the parturient did not receive a transfusion due to the effectiveness of CTC in controlling the disease.

The good response to the initial treatment with CTC is sufficient to prevent complications such as PE and preterm delivery without any use of acetylsalicylic acid.

Conclusion

A multi-disciplinary approach including the obstetrician and the hematologist is crucial for good management of pregnant women affected with TTP. Pregnancy planning remains desirable. The choice of the mode of delivery should be based only on obstetric circumstances. Post-partum follow-up is important, with family and newborn screening in case of congenital TTP.

Bibliography

1. Mohamed Radhi., *et al*. "Thrombotic microangiopathies". *ISRN Hematology* (2012): 310596.
2. M Davies., *et al*. "Successful vaginal delivery in a patient with extreme thrombotic thrombocytopenic purpura at term". *Journal of Obstetrics and Gynaecology* 29.8 (2009): 765-766.
3. S Meti., *et al*. "Successful pregnancy in a case of congenital thrombotic thrombocytopenic purpura". *Journal of Obstetrics and Gynaecology* 30.5 (2010): 519-521.
4. T Koyama., *et al*. "Successful delivery in a female with thrombotic thrombocytopenic purpura". *Japan Journal of Medicine* 26.3 (1987): 381-384.

Volume 14 Issue 6 June 2025