# Bell's palsy in pregnancy: is there an association with obstetric complications? Authors Gonçalves, M. Freitas, G. Machado, AP. Moucho, M. Affiliations Centro Hospitalar Univer

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Objective and Methods

- This study reports a case of a patient with diabetes who developed Bell's palsy in the third trimester of a pregnancy, complicated by stillbirth and eclampsia.
- The data was obtained by patient interview and the consultation of the electronic clinic process (Obscare ®, Sclínico ® and Astraia®).



## Case presentation

- 39-year-old Maroccan Smoker; BMI 23,2 Kg/m2
- Gravida 3 Para 2 (vaginal delivery and c-section)
- First pregnancy: normal
- Second pregnancy: gestational diabetes treated with insulin and complicated by diabetic ketoacidosis, requiring intensive care unit (ICU) admission.



- Inicial vigilance at health family care center
- Referred to hospital at 16 weeks due to loss of routine first trimester screening for aneuplodies
- First ultrassound at 16w2d: normal
- Noninvasive prenatal testing (NIPT): low risk for aneuploidies with fetal fraction of 10%
- No blood test of the first-trimester
- Morphologic ultrasound at 22w4d: normal.
- Discharged again to health family care to normal pregnancy vigilance



- Routine second-trimester screening revealed 75g oral glucose challenge test alterations (133 mg/dL at 0 hours, 229 mg/dL at 1 hour and 269 mg/dL at 2 hours)
- HbA1C -> 6,9%.
- Referred to hospital to endocrinologist/obstetrics consultation



## PROBABLE PREVIOUS DIABETES

(no reclassification for diabetes in the previous postpartum consultation)

## STARTED INSULIN THERAPY

• Fetal ultrasound (28w4d) -> suspicion of fetal macrosomia, estimated fetal weight of 1543gr (P95.5)



- Insulin adjustments
- Self-monitoring of capillary blood glucose was challenging
- HbA1C 6,9% >> 6,2 %
- Fetal ultrasound (33w1d): suspicion of fetal macrossomia, estimated fetal weight of 2691 gr (P94.9)



## weeks

- At 35w5d, was admitted for 3 days with a false Discharged without diagnosis; labor complications
- Antenatal Group B Streptococcus screening test -> positive



- 36w4d: Emergency department with weakness and sensory changes on the left side of her face
- Evaluated by neurology and otorhinolaryngologist to exclude other causes.



Left peripheral facial palsy House Brackmann IV

### Treatment

prednisolone 60 mg for 5 days and facial rehabilitation



- 37w4d: readmitted in labor
- Fetal death was detected
- BP 142/92 mmHg

C-SECTION (COUPLE OPTION) stillborn, male fetus, 4549 g

4 hours later

## EARLY POSTPARTUM HEMORRAGE

- Mechanic measures: bimanual compression and external uterine massage
- Pharmacological measures: transfusion (1 unit RBC) + tranexamic acid + oxytocin ev + retal misoprostol + sulprostone ev

## postpartum

Analytical study of unexplained fetal death: no alterations

Anatomopathological and necropsy results in course

## RECLASSIFICATION OF DIABETES

75 g oral glucose challenge test alterations (113 mg/dL at 0 hour and 160 mg/dL at 2 hours).

Normal blood pressure values

Oriented to endocrinologist consultation



## **DIABETES MELLITUS**

- Clinical and laboratory good evolution without any further seizure episodes
  - Normal EEG and Cerebral MRI (to exclude other causes and complications)
  - Discharged in good clinical condition in the 8rd day postpartum
  - Medication: enalapril 10 mg 1id, metformin 1g + empaglifozin 5mg and iron supplementation.
  - Thromboembolic prophylaxis with enoxaparin.

postpartum

Oriented to postpartum consultation and psychology.



**ECLAMPSIA** 

- Severe hypertension (BP 170/113 mmHg)
- Generalized tonic-clonic seizure
- Post ictal status with recovery of the state of consciousness without sensorimotor or pupillary alterations.





# ICU admission with multiorgan dysfunction (3 days)

- Magnesium sulfate infusion (24 hours) and labetolol for BP control
- Non-oliguric Acute Kidney Injury and liver dysfunction cytocholestasis

## Conclusion

This case shows the possible association between eclampsia, diabetes and idiopathic peripheral facial nerve palsy due to similar phsiopathological mechanisms. Facial palsy can occur during the third trimester or early postpartum, and the prognosis is generally good. However, obstetricians must be vigilant, with closer monitoring of blood pressure. Bell's palsy is the most frequent unilateral cranial nerve pathology affecting women and may be a prodromal sign of coexist disorders such as gestacional diabetes or mellitus diabete maternal and fetal conditions. Control of blood sugar and appropriate fetal surveillance is crucial to preventing stillbirth in diabetic women.