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RESEARCH ARTICLE

GESTATIONAL DIABETES COMPLICATED FROM KETOACIDOSIS DURING FETAL LUNG MATURATION CORTICOSTEROID THERAPY. A CASE REPORT

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Abstract

Gestational diabetes complicated by an acid-ketosisis a rare but serious complication, involving the life-threatening condition of the mother and fetus binomial, responsible for significant maternal and fetal mortality. It is an acute metabolic emergency with multidisciplinary management. Early diagnosis and treatment are critical to the life of the mother and fetus. We report the case of a 32-year-old womanwith 24 weeks of amenorrhea, without a personal or family history of diabetes, carrying a recently discovered gestational diabetes unbalanced, was admitted to obstetric emergencies in a context of premature rupture of membranes. She was treated with a corticosteroid for fetallung maturation causing an acidketosis on gestational diabetes. She received insulintherapy, rehydration and correction of heroinic disorders. Close monitoring was maintained for up to 36 weeks of amenorrhea, at which time it was triggered and delivered via vaginal route with out maternal and fetal complications.

Introduction:-

Gestational diabetes (GD) is defined by the WHO as a disorder of glucose tolerance leading to hyperglycemia of vary ing severity, beginning or first diagnosed during pregnancy, Regardless of the treatment and course required in the postpartum period, and its prevalence is estimatedat 10%, it may be much higher in specific populations and tends to increase due to the increased prevalence of obesity[1].

It is a metabolic disorder esulting from an overreaction of insulinresistance and a defect in insulinsecretion[2].

The acid-ketosis decompensation complicating gestational diabetesis a rare condition, responsible for a significant maternal-fetal mortality[3].

Nevertheless, we report the case of a patient followed for gestational diabetes unbalanced complicated acidoketosis decompensation during etallung maturation corticosteroidtherapy.

Patient and Observation:-

Ms X, aged 32, 3rd gesture 2 parities, carrier of a gestational diabetes of recent discoverya dmitted in emergency at 24 weeks of amenorrhea in a context of premature rupture of membranes beforeterm.

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The examination does not find any particular infectious context, the clinical examination finds an apyretic patient with a uterine height decreased in relation to her gestational age and the result of clear amniotic fluid on speculum examination. She is hospitalized in emergency, a peripheral venous line is taken and an infectious balance returned negative.

An objective obstetric ultrasound provides an estimate of the fetal weight corresponding to gestational age, a decreased amount of amniotic fluid and correct morphology within the limits of the examination.

Monitoring of his glycemic cycles objective of the disturbed measures requiring the introduction of 6UI of slow insulin in the evening allowing the stabilization of blood sugar for two days.

Given the gestational age and estimated fetal weight at the limit of fetal viability (611g), the decision was to perform a fetal pulmonary maturation based on betamethasone (Celestène12mg) in intramuscular renewable after 24 hours.

The evolution was marked by the installation of obnubilation and diffuse abdominal pain with polypneaat 36 cycles per minute, capillary glucose at 3.2g/ dl and 3 cross ketonuria to the urine strip.

The diagnosis of acidoketosis following the injection of corticosteroidtherapy was made, and the regimen of rehydration and rapid insulintherapy started immediately.

Under treatment and close monitoring, the patient improved and was released at 28 weeks of amenorrhea with weekly clinical and biological monitoring.

She was able to extend her pregnancy up to 36 weeks of amenorrheaat the end of which she was triggered with prostaglandin and was able to give birth by vaginal route to a male Newborn; Apgar 10/10 and eutrophication birth weight.

The baby-bearings eries for the mother and newborn were unspecial.

Discussion:-

Diabetic ketoacidosis (DAC) is a serious complication of diabetes characterized by an accumulation of ketones in the blood, resulting in high blood acidity (acidosis). This condition usually occurs when the insulin level is insufficient, which prevents the cells from receiving enough glucose to produce energy. In response, the bodies begin to break down fat to produce energy, generating ketones as a byproduct[4].

During pregnancy, diabetic ketoacidosisis a rare but serious complication that cant hreaten the life of the mother and fetus. Hormonal changes during pregnancy, especially from the 2nd trimester onwards, may increase insulin resistance, which increases the risk of developing diabetic ketosis[5].

Diabetic acidosis during pregnancy is relatively rare, with estimates of its occurrence ranging from 1 to 3% of pregnancies in diabetic women. However, when it occurs, it requires medical attention by an obstetrician gynecologist, endocrinologist and emergency reanimation to avoid serious complications such as fetal death, Induced preterm birth or other maternal complications [6].

Corticosteroids, such as betamethasone or dexamethasone, are commonly given between 24 and 34 weeks of amenorrhea to accelerate fetal lung maturation in cases of risk of premature birth7.

Corticosteroids increase insulin resistance and hepatic glucose production, which can cause high blood sugar. In diabetic pregnant women, this increase in glucose levels can quickly exceed the insulin management capacity given, resulting in increased ketogenesis and, therefore, acid-ketosis as our patient’s case.
Therefore, increased monitoring of pregnant women with diabetes receiving corticosteroid therapy for fetal lung maturation is necessary and the indications of the latter should be strictly observed.

Multidisciplinary collaboration between obstetricians, endocrinologists and other health professionals is also essential for proper management.

Conclusion:-

In summary, although fetal lung maturation-induced ketoacidosis is rare, it is a serious complication that requires close management and monitoring and proactive management to ensure the safety of bothmother and fetus.

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