

Hypoglycemia, polycythemia and hyponatremia in a newborn exposed to nebivolol during pregnancy

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Background

Nebivolol is a third generation beta blocker with a selective antagonistic activity on β_1 receptors. Furthermore, it has a vasodilating properties, resulting from a direct stimulation of endothelial nitric oxide synthase. Nebivolol is indicated in treatment of hypertension and heart failure. It is well tolerated (1-3). We report the first case, to our knowledge, of the occurrence of hypoglycemia, polycythemia and hyponatremia that have arisen, within hours of birth, in an infant, who was born by spontaneous delivery at term by a mother that received an off label prescription of nebivolol during pregnancy for unspecified tachycardia.

Case report

Newborn by spontaneous delivery at term, with birth weight of 3040 g and Apgar score 6-9, was admitted to the Pediatrics and Neonatology Unit of the Moscati Hospital (Aversa, Italy), about 24 hours after birth, for persistent and severe hypoglycemia (blood glucose = 30 mg/dl) and jaundice (total bilirubin = 12.5 mg/dl, indirect bilirubin = 11.75 mg/dl). Maternal history revealed a normal pregnancy. The mother reported only taking nebivolol 5 mg/day for an unspecified tachycardia, in the last 4 months of pregnancy until delivery. Clinical and instrumental investigation carried out during hospitalization did not reveal any abnormalities, either congenital or perinatal. The infant was treated for metabolic and electrolyte imbalance and was discharged on the 10th day in good clinical conditions and with normalization of clinical and laboratory parameters that were altered at the time of admission.

Conclusion

Currently, there is a lack of specific studies on tolerability of nebivolol during pregnancy. In order to better define the safety profile of all β -blockers during pregnancy and, in particular, for nebivolol there is a need of further studies with the aim to minimize risks both for the unborn and pregnancies (4-8).