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Ballantyne Syndrome: Case series

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Objective

We describe a series of pregnancies diagnosed with Ballantyne syndrome in which the fetal condition that caused the disease was identified, as well fetal and maternal clinical condition.

Methods

Information was collected from the clinical records. Biodemographic data, the etiology of the syndrome, clinical picture, maternal biochemical and imaging results and perinatal outcome were obtained.

Results

Four cases were diagnosed during the study period. The mean maternal age was 33 years(22. 5-40. 0) including two multiparous and two primiparous women. Two pregnancies were monochorionic twin gestations, two were singleton gestations. The etiology of the Ballantyne syndrome in the monochorionic pregnancies was related to specific monochorionic complications of twin-to-twin transfusion syndrome (TTTS) and selective intrauterine growth restriction (sIUGR) type II associated with polyhydroamnios in a twin with Beckwith Wiedemann syndrome. One fetus showed hypertrophic cardiomyopathy, polyhydramnios and subsequent non-immune fetal hydrops in the context of Noonan syndrome, and the other had a limb lymphangiohemangioma compatible with Klippel Trenaunay Weber syndrome. The TTTS case was managed performing amnioreduction at 21 weeks, but evolved with a premature rupture of membranes and second-trimester abortion 24 hours after amnioreduction. The twin pregnancy complicated by sIUGR was delivered at 34 weeks and Ballantyne syndrome was diagnosed postpartum. The fetus showing the cardiomyopathy at 29 weeks developed hydrops requiring immediate delivery and died two hours postpartum. The fetus with Klippel Trenaunay Weber syndrome and fetal hydrops could successfully treated by transplacental digoxin. The hydrops resolved and the fetus was delivered at 39 weeks. Shortly after birth the mother developed hypertension, oliguria, hyperkalaemia and dilutional anaemia, compatible with Ballantyne syndrome. In our series, the most frequent maternal clinical presentation were the presence of normochromic anaemia caused by haemodilution, generalized edema in all 4 cases, followed by hypertension in three cases, increase of Pro-BNP in two cases and pulmonary edema in one case.

Conclusion

The Ballantyne syndrome is a severe maternal complication associated with various fetal conditions that cause heart failure with or without hydrops, resulting in a high rate of neonatal mortality and maternal morbidity.