FETAL ANGIOTENSIN RECEPTOR BLOCKERS EXPOSURE – NEONATAL OUTCOME –

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BACKGROUND AND AIMS

In utero exposure to renin-angiotensin-aldosterone system inhibitors, as angiotensin receptor blockers (ARBs), is associated with an increased risk of adverse fetal effects. Most common complications are related to impaired fetal renal function, including anuria and renal failure, resulting in oligohydramnios with consequent pulmonary hypoplasia, skeletal deformations and limb contractures. Other adverse outcomes include hypotension, hypocalvaria, cerebral malformations, miscarriage and perinatal death.

CASE REPORT

PREGNANCY

- 35 year-old mother with **chronic hypertension**
- Treated with **olmersartan** and hydrochlorothiazide for the previous 6 months
- **Unknown pregnancy** until 3 days before delivery
- Estimated gestational age **31 weeks and 3/7 days**
- Severe **oligohydramnios**

DELIVERY

- Cesarian section, female newborn, Apgar scores 6/8/9
- Somatometry in the 50th-90th centile for estimated gestational age (birth weight 1695 g)

EVOLUTION

- **Dysmorphic features** (large fontanelles and limb defects)
- **Acute respiratory distress** requiring invasive ventilation
- **Pulmonary hypoplasia**
- Renal ultrasound → normal size kidneys with **poor parenchymal differentiation**
- **Anuria, anasarca, intractable hypotension** and **hypoxemia** regardless of maximal respiratory and cardiovascular support
- **Death** 22 hours after birth

Figure 1. Small lungs with diffuse opacification (a) and chest tube on the right due to pneumothorax (b); right inferior limb contractures (c).

CONCLUSIONS

As other cases reported in the literature, exposure to ARBs during an unknown pregnancy lead to a fatal outcome. This group of drugs is contraindicated during gestation and, in order to increase awareness of its deleterious effects, fetotoxicity outcomes must be reported. In childbearing age women without effective contraceptive methods other antihypertensive agents should be considered.