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CONGENITAL PULMONARY AIRWAY MALFORMATION: PRENATAL DIAGNOSIS, MANAGEMENT AND PERINATAL OUTCOMES

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INTRODUCTION

- Congenital pulmonary airway malformation (CPAM), is a rare developmental anomaly of the lower respiratory tract.
- CPAMs are categorized, pathologically, in types 0 through 4 and have different clinical presentations and prognoses. Type 1 CPAM is most common, and type 4 CPAM has high malignant potential.
- Affected patients with CPAM may present with respiratory distress in the newborn period or may remain asymptomatic until later in life.
- We report several cases of CPAM describing its finding, management and evolution. Cases were followed up untill surgery. Respiratory symptoms were documented.

METHODS

- First, a literature review was conducted on major databases and scientific platforms, including the Fetal Medicine Foundation website.
- Secondly, a desciptive study of cases of CPAM diagnosed by prenatal ultrasound scan between 2017 and 2023 in our center was carried out (hospital with neonatal intensive care and pediatric surgery).
- Ultrasound scans performed by one of the gynecologists with experience in prenatal diagnosis.
- All patients gave their approval to the use of relevant data from their studies for scientific purposes.

OBJECTIVES

1. Literature review in order to update this topic and search about the available scientific evidence.
2. Establish a registry of cases of Congenital pulmonay airway malformation (CPAM) diagnosed prenatally at the Central University Hospital of Asturias (HUCA). Assess antenatal management and perinatal outcomes.

RESULTS

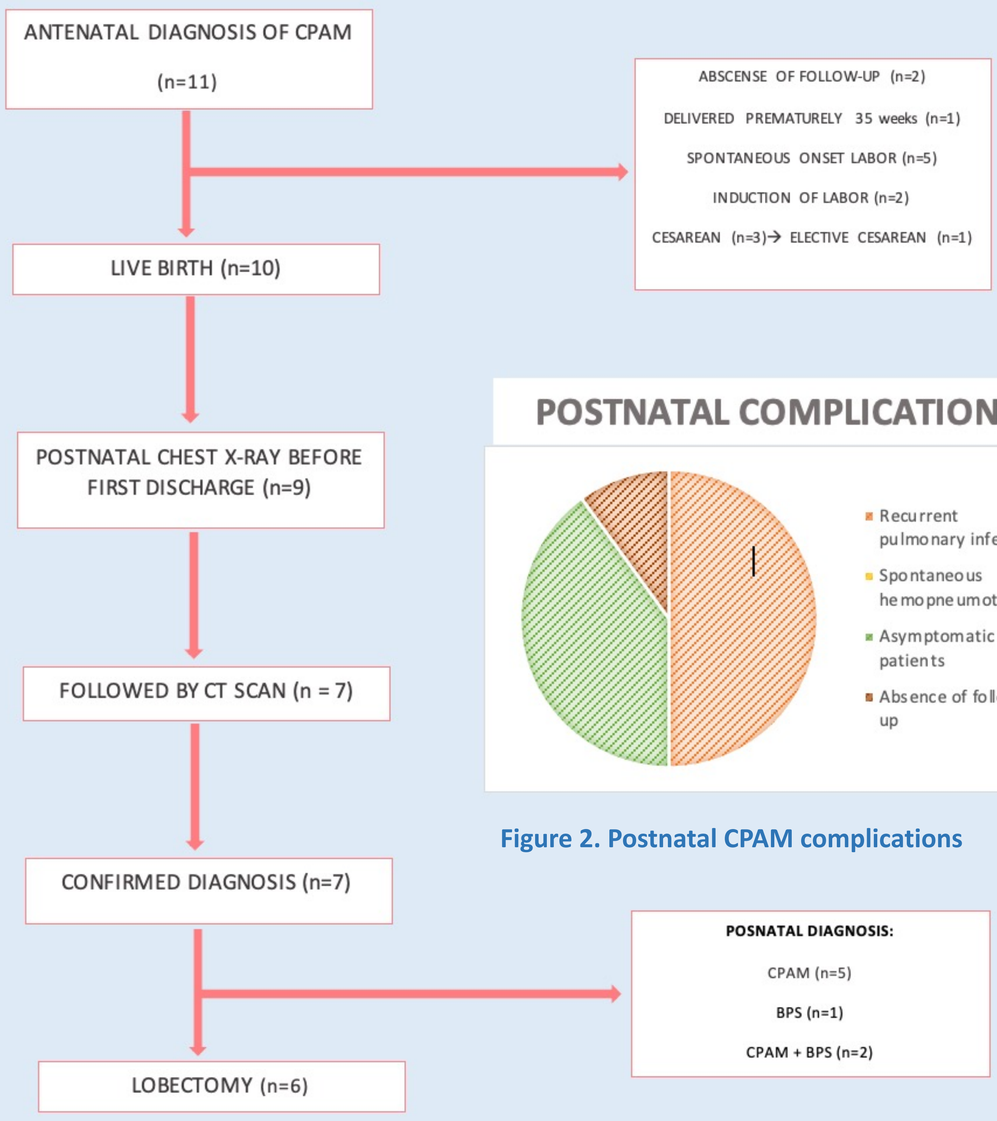

Figure 1. Managment flowchart of antenatally diagnosed CPAM. Source: Own cases.

Figure 2. Postnatal CPAM complications

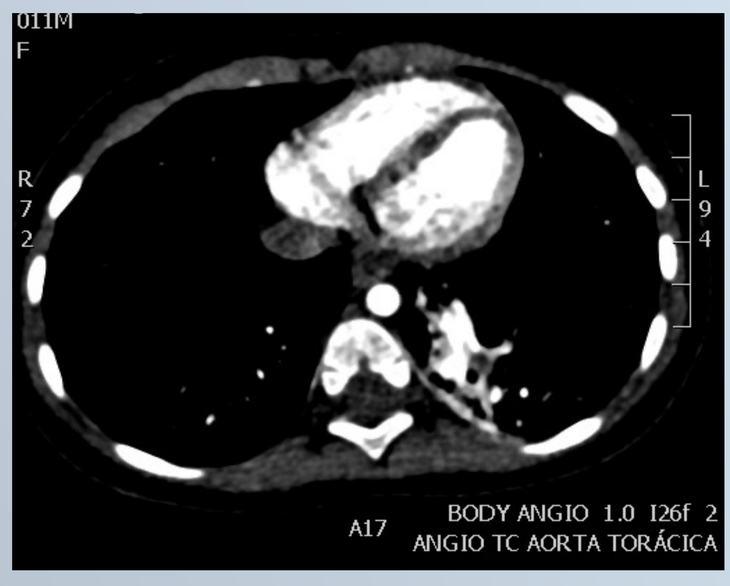

Figure 3. Whole Body CT Angiography of one of our patients

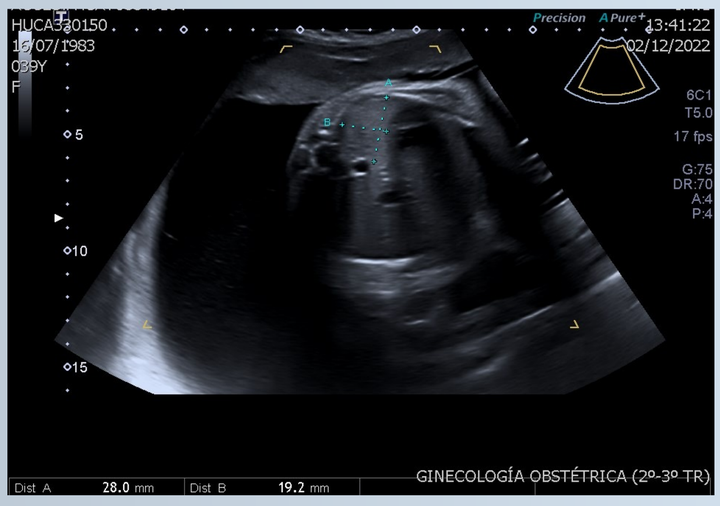

Figure 4. CPAM. 3th trimestre ultrasound scan

CONCLUSIONS

1. According to literature, management of fetuses with CPAM includes assessment for associated abnormalities and serial ultrasound examinations to monitor changes in the CPAM and development of hydrops.
2. It is recommended to perform a CT or MRI scan to the newborn even in infants with normal chest radiographs.
3. In the cases we showed, no associated fetal malformations or severe complications were found. Fortunately, the surgery was curative and the prognosis of the children is excellent.

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