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# INFANTS WITH CONGENITAL LUNG MALFORMATIONS

Identified at our tertiary maternity hospital over 5-year period

1. National Maternity  
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## BACKGROUND

- Congenital lung lesions, of which congenital pulmonary airway malformations (CPAM) are most common, represent a spectrum of anomalies with unknown aetiology
- We wished to identify cases at our hospital and review subsequent management

## METHODS

- We identified fetuses referred to our fetal assessment unit (FAU) with suspected CPAM diagnosis, between 2018-2022.
- Retrospective chart review, over a 5-year period
- Data collected from electric medical records
- Contacted parents by phone for follow-up data if it was not recorded

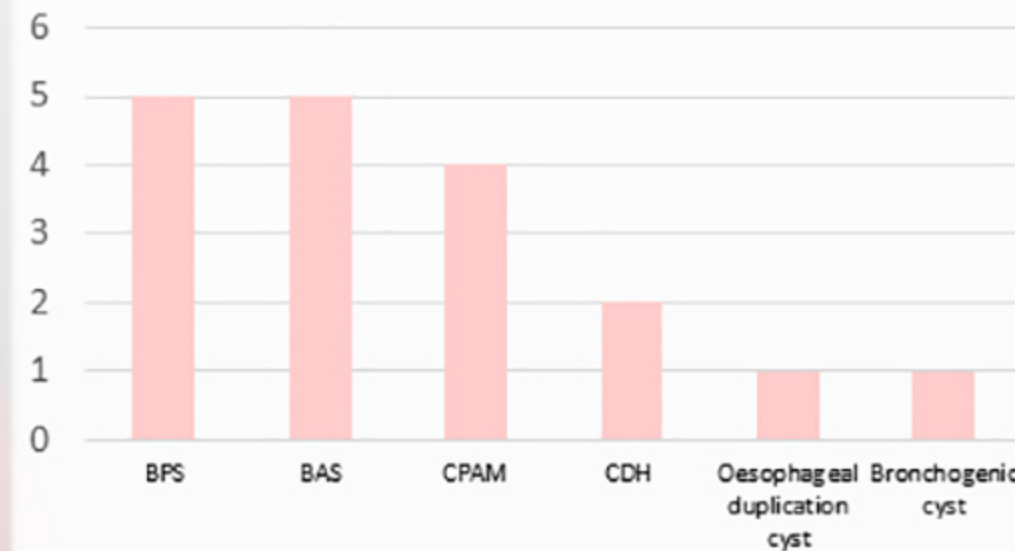
## RESULTS

### 24 fetuses referred to FAU with suspected CPAM

- Ultrasound performed at a mean (SD) 21.2 (0.7) weeks
- Fetal MRI performed in 18 (79%) cases (Fig 1)
- Patients with CDH not included in follow-up
- 6 did not have a fetal MRI - US scans c/w CCAM
- On f/up ultrasounds, the lesion: ↓ size in 11 (50%) cases, remained stable in 8 (37%) cases, ↑ size in 3 (13%) cases

## RESULTS

Figure 1. Fetal MRI diagnoses



- Fetal ECHO performed in 10 (45%) cases - 2 anomalies: 1 double outlet right ventricle (DORV), 1 hypoplastic heart
- Intra-uterine demise, associated with severe hydrops, occurred in 2 cases

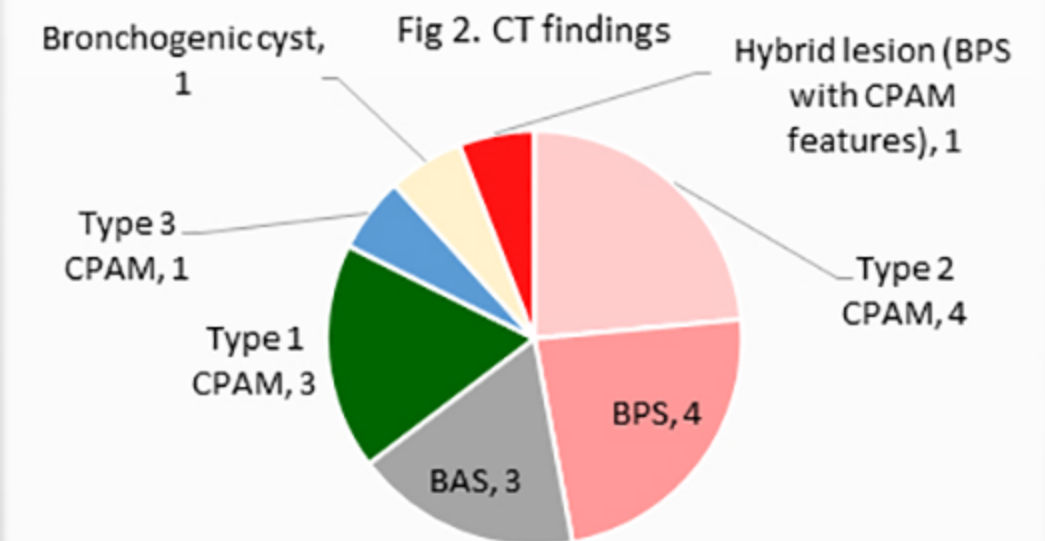
### 20 surviving fetuses with lung lesions

- Mean (SD) GA & BW: 39 (1) weeks & 3.34 (0.55) kg
- 12 (60%) infants admitted to NNU
- 2 (10%) infants intubated - 1 with DORV, 1 undergoing therapeutic hypothermia
- 2 (10%) infants received non-invasive respiratory support
- All infants had a postnatal CXR
  - 12 (60%) in-keeping with antenatal findings
  - No definite lesion on CXR in 8 (40%)
- All referred to respiratory and/or cardiothoracic surgery

## RESULTS

### Longer-term data

- Follow up data for 17 (93%) infants (3 lost to f/up)
- CT diagnosis, at 2-18 months, consistent with antenatal findings in 14 (82%) cases (Fig 2)



- 6 (35%) infants with ongoing respiratory symptoms had lobectomy: 3 with type 1 CPAM, 1 with type 2 CPAM, 1 with bronchogenic cyst, 1 with BPS
  - Symptoms resolved for all following surgery
- Remaining 11 (65%) infants remain asymptomatic and have ongoing follow-up

## DISCUSSION & CONCLUSION

- Fetal MRI findings were consistent with postnatal CT findings in the majority of cases
- Most infants were asymptomatic; those with ongoing respiratory symptoms underwent surgical intervention