

BACKGROUND & WHY THIS CASE MATTERS

Congenital cervical masses can cause life-threatening neonatal airway obstruction. Lymphangiomas are usually cystic and avascular; teratomas are more often mixed solid–cystic and vascular.

~1 in 6,000

estimated live-birth prevalence; airway compromise is the principal driver of morbidity and mortality [1].

- Overlapping imaging features made prenatal diagnosis uncertain.
- Reassuring fetal MRI did not predict the difficult neonatal airway.
- Surgical-airway preparedness was lifesaving.

LYMPHANGIOMA vs TERATOMA

| LYMPHANGIOMA                                                                                                                          | TERATOMA                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Multiloculated, cystic</li><li>• Avascular on Doppler</li><li>• Regression reported</li></ul> | <ul style="list-style-type: none"><li>• Solid + cystic</li><li>• Internal vascularity</li><li>• Often needs early resection</li></ul> |

PATIENT AT PRESENTATION

|                                 |                         |                              |
|---------------------------------|-------------------------|------------------------------|
| 34 years, G4P2<br>2 previous CS | 23 weeks<br>at referral | 1.8 × 1.9 cm<br>initial mass |
|---------------------------------|-------------------------|------------------------------|

KEY CLINICAL QUESTION

Could a lesion with reassuring fetal airway imaging still produce a critical airway emergency at birth?

In this case, the answer was yes, and multidisciplinary preparation changed the outcome.

PRENATAL COURSE & IMAGING

At 23 weeks, ultrasound showed a mixed cystic–solid anterior midline neck mass with absent Doppler flow. Serial ultrasound showed progressive enlargement without hydrops or tracheal deviation.

36 weeks

8.7 × 6.9 × 4.5 cm • AFI 29.6 cm • diagnosis remained uncertain

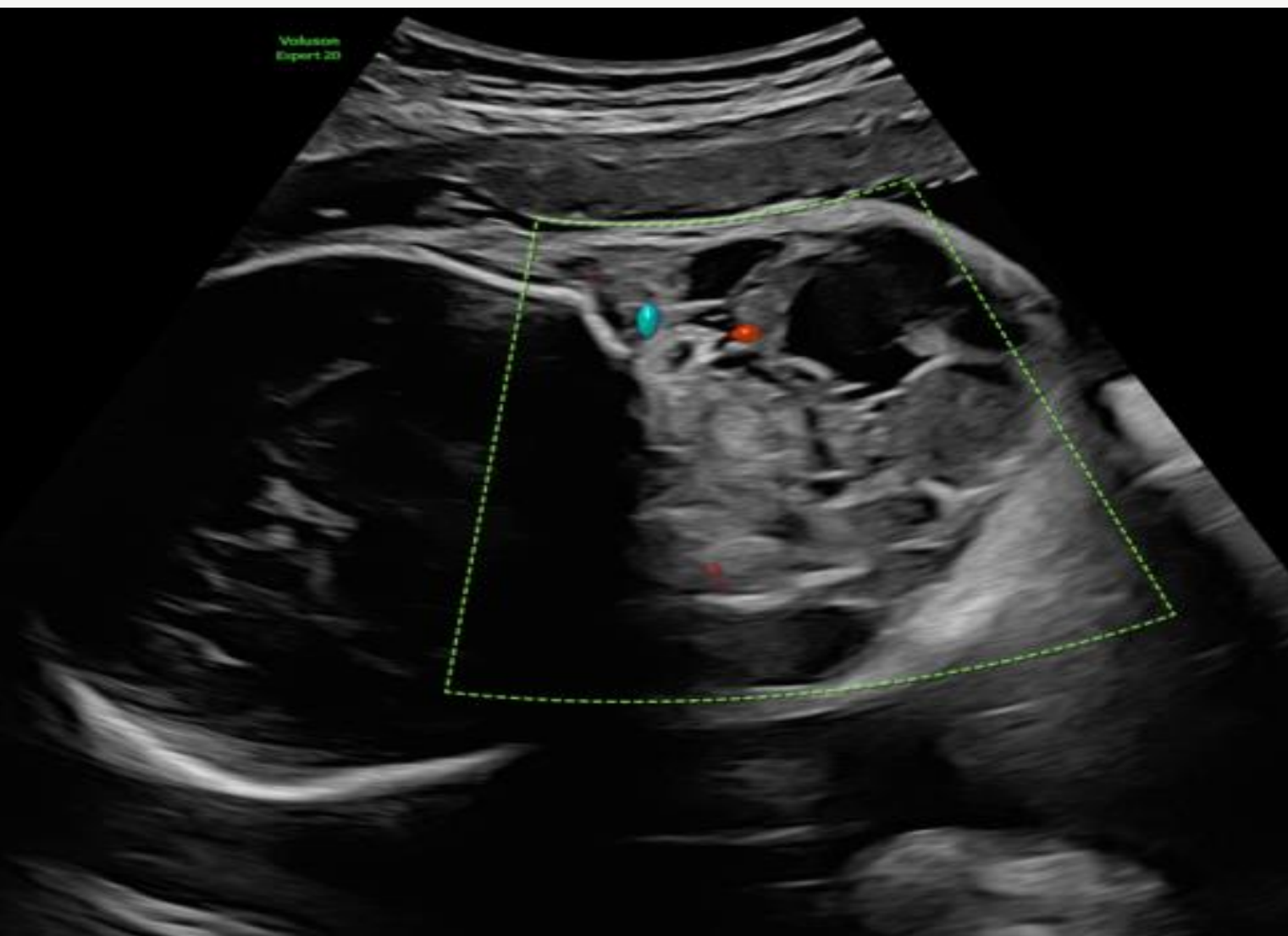


Figure 1. 36 weeks — multicystic cervical mass in the submandibular region with absent internal Doppler flow.

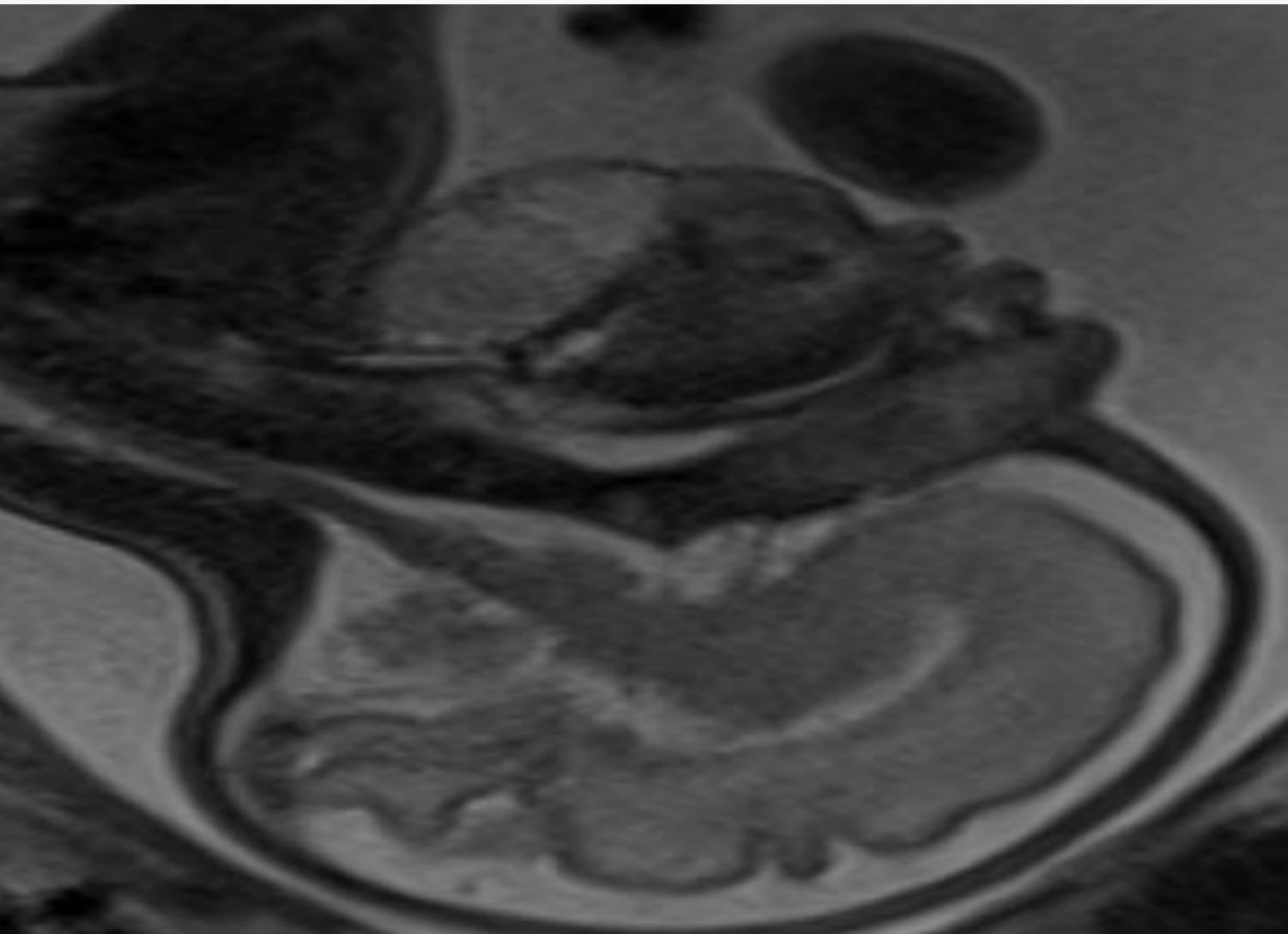


Figure 2. Sagittal T2 MRI — preserved fetal airway patency.



Figure 3. 3D ultrasound, 36 weeks — lobulated multicystic anterior neck mass.

IMAGING TRAJECTORY

Rapid growth and polyhydramnios increased concern, while absent hydrops and apparent airway patency made neonatal airway risk difficult to predict.

MDT PLAN

MULTIDISCIPLINARY DECISION

- Tertiary surgical centre
- EXIT + emergency tracheostomy on standby
- Elective CS at 38 weeks

DELIVERY & NEONATAL AIRWAY

|            |                                                           |
|------------|-----------------------------------------------------------|
| BIRTH      | Elective CS; firm midline neck mass.                      |
| ~10 MIN    | Intubation failed; marked anterior tracheal displacement. |
| URGENT     | ENT tracheostomy; 3.5 mm uncuffed tube secured airway.    |
| +15–20 MIN | Cord clamping deferred until airway secured.              |

POSTNATAL OUTCOME

- **Postnatal MRI** confirmed cervical lymphangioma without intrathoracic extension.
- **Sirolimus + sclerotherapy** achieved substantial radiological improvement.
- Infant remains **tracheostomy-dependent** under multidisciplinary follow-up.

DISCUSSION

- Fetal MRI cannot fully predict the neonatal airway.
- Significant cervical masses require multidisciplinary delivery and surgical-airway preparedness.
- Delivery should occur in a tertiary centre with immediate neonatal ENT/airway expertise.

TAKE-HOME

Reassuring fetal MRI does not guarantee a safe neonatal airway.

REFERENCES

1 Kennedy TL et al. Laryngoscope. 2001;111:1929–37. 2 Derinkuyu BE et al. Diagn Interv Radiol. 2014;20:52–57. 3 Bouchard S et al. J Pediatr Surg. 2002;37:418–26. 4 Doğer E et al. J Turk Ger Gynecol Assoc. 2015;16:118–20. 5 Diaz-Primera R et al. J Ultrasound Med. 2022;41:1019–26. 6 Laje P et al. J Pediatr Surg. 2015;50:311–14.