

Natural history and perinatal outcomes of fetal neck masses : A single tertiary center case series

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OBJECTIVES

Fetal neck masses are rare congenital anomalies associated with significant perinatal morbidity, mainly due to airway obstruction and compression of adjacent structures. This study aimed to describe the natural history, antenatal course, perinatal management and neonatal outcomes of fetal neck masses at a tertiary referral center.

METHODS

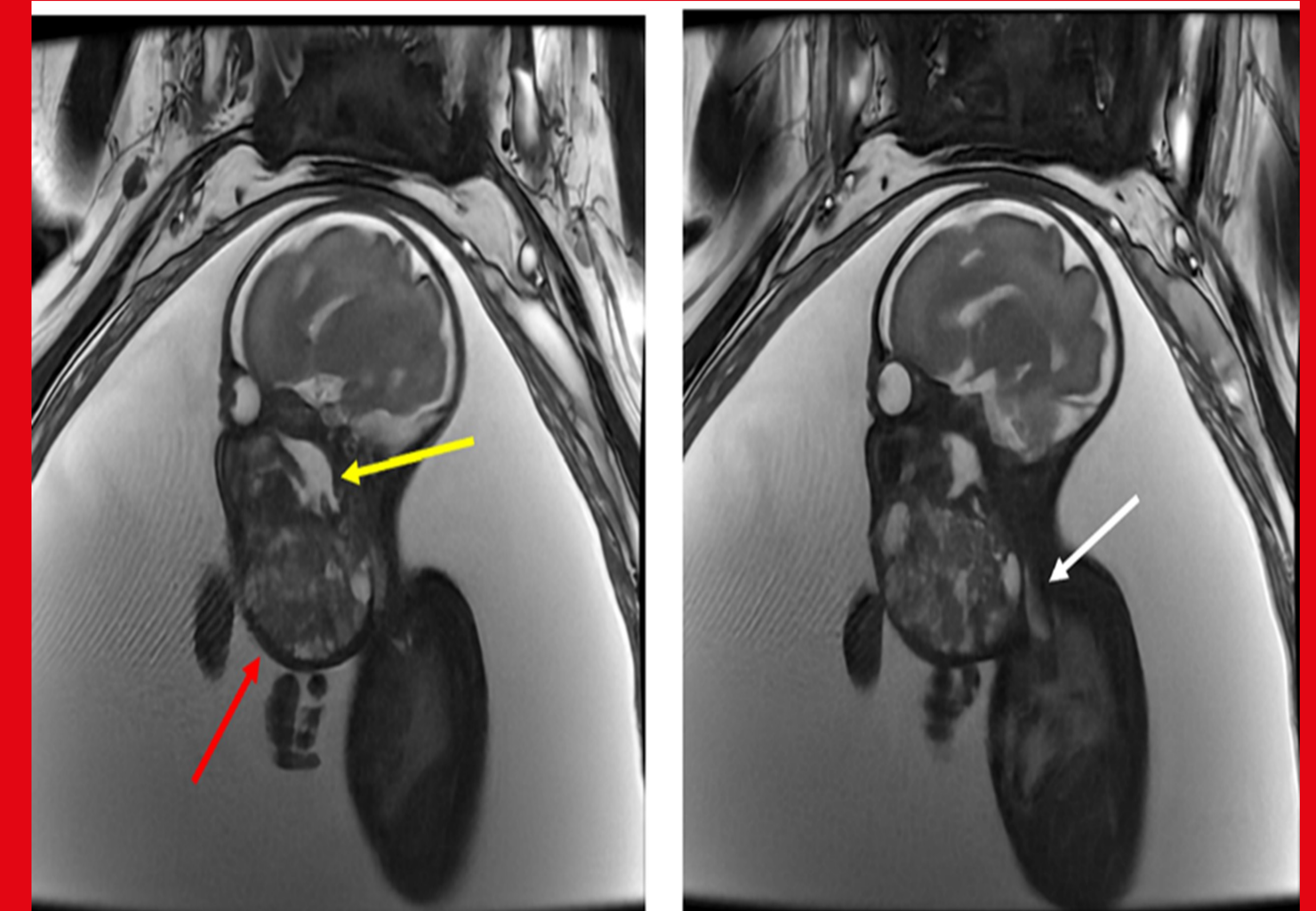
A retrospective review was conducted of pregnancies with a prenatal diagnosis of fetal neck mass referred to the fetal medicine unit at the Royal Hospital, Muscat, Oman, between January 2023 and December 2025. Maternal characteristics, imaging findings, antenatal complications, delivery planning, EXIT procedure and neonatal outcomes were analyzed.

RESULTS

Seven fetal neck mass cases were diagnosed at 22-23 weeks. Most had polyhydramnios and features of airway compression, requiring planned EXIT procedures and advanced neonatal airway management. Three cases also required amnioreduction. Diagnosis included teratoma, lymphangioma, fetal goiter and epiglanthos-type lesion. There were 2 neonatal deaths and 1 late infant death, with variable outcomes among survivors.

Conclusion

Fetal neck masses pose significant antenatal and perinatal challenges. **Early diagnosis, multidisciplinary planning and availability of EXIT procedures are essential to optimize neonatal outcomes.** however, morbidity and mortality remain high, highlighting the **need for standardized management and long-term follow up.**



large complex anterior neck mass extending to the thoracic inlet, diagnosed as immature teratoma.



Anterior solid and cystic avascular neck mass later diagnosed as teratoma.