

Sanin-Ramirez, Daniel; Sabria, Joan; Martinez, Josep M; Eixarch, Elisenda; Bennasar, Mar; Gratacos Eduard

BCNatal | Fetal Medicine Research Center (Hospital Clínic and Hospital Sant Joan de Déu, University of Barcelona), Barcelona, Spain.
Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain.

Objectives: To describe the role of fetoscopic airway assessment prior to Ex-Utero Intrapartum Treatment (EXIT) in fetuses with suspected airway obstruction.

Methods: Retrospective observational study (2013–2025) in a single center, including all fetuses with suspected airway obstruction by ultrasound and MRI, undergoing fetoscopic airway evaluation prior EXIT. Primary outcomes were feasibility, impact on the perinatal approach (need for EXIT, airway device, complementary strategies to assist securing the airway), and short-term outcomes.

Results: Nine fetuses underwent EXIT with prior fetoscopic assessment of airway patency. Fetoscopy confirmed airway patency in one case after ultrasound-guided puncture of the cervical mass (11.1%), avoiding EXIT. In two cases, fetoscopy enabled placement of a guiding tracheal catheter to assist intubation under placental support. Delivery-room survival was 100%; one neonate with a giant teratoma died before discharge due to severe pulmonary hypoplasia. Only one maternal postoperative hemorrhage was found.

Characteristics of the fetoscopic EXIT procedures.

		n=9
Diagnosis	Teratoma	3 (33.3%)
	Lymphangioma	3 (33.3%)
	Cervical bronchogenic cyst	1 (11.1%)
	Laryngeal atresia (CHAOS)	1 (11.1%)
	Pierre Robin Sequence	1 (11.1%)
Airway type	Orotracheal intubation	7 (77.8%)
	Tracheostomy	1 (11.1%)
	Spontaneous	1 (11.1%)
EXIT interval (minutes)		17 (8, 25)
Fetoscopy duration (minutes)		14 (3, 23)
Intubation duration (minutes)		8 (1, 17)
Gestational age at delivery (weeks)		35 ⁺⁶ (34 ⁺⁴ , 37 ⁺¹)

Categorical variables are described as number (%), and numerical variables as median (IQR).

Conclusion:

Fetoscopic airway evaluation prior to EXIT is a valuable adjunct in the management of fetuses with suspected airway obstruction, it can confirm the need for EXIT, improves airway assessment and enables tailored strategies to help securing it.