Use of High-Flow Nasal Oxygen to facilitate optimal surgical conditions in the management of idiopathic subglottic stenosis during third trimester

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Summary

Successful surgical management of severe idiopathic subglottic stenosis (SGS) in a 35/40 parturient using High Flow Nasal Oxygen (HFNO) with apnoea time of 21 minutes without desaturation.

31F P2G1
Referred ENT at 35/40

History:

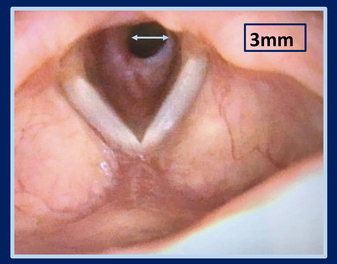
- 4 weeks Increasing SOB and voice change
- Accelerated over last few days
- Nil significant past history

Presentation:

- Stridulous at rest and dyspnoeic
- Maintaining normal physiology

Diagnostic nasendoscopy:

- 3mm subglottic stenosis



Management:

- Multidisciplinary approach in planning and theatre
  - ENT
  - Obstetrics
  - Anaesthesia
- Stabilisation overnight with steroids, adrenaline nebulisers and high dose PPI
- Decision made to perform balloon dilatation with radial incisions

Anaesthetic:

- 45 degrees back up position
- TIVA with propofol and remifentanil
- Rocuronium paralysis
- High flow nasal oxygen
  - 50 l/min awake
  - 70 l/min after induction
- Airway patency maintained with simple manoeuvres



Outcome:

- **Single apnoea time of 21 minutes**
- No physiological compromise
- Doppler foetal heartbeat monitoring normal
- Immediate resolution of symptoms and no recurrence
- Healthy baby girl delivered by elective LSCS at term

Discussion

Idiopathic Subglottic Stenosis

- Rare
- Affects women 20-40 years old
- Diagnosis often delayed until symptoms critical
- Aetiology uncertain
- Potentially exacerbated by gastro-oesophageal reflux

Multi-Disciplinary Input

- Essential
- Collaboration throughout planning and management stages

Communication

- Detailed with patient – truly informed
- Comprehensive team brief with all present in theatre

High Flow Nasal Oxygen

- Excellent oxygenation for prolonged apnoeic time
- Broad applicability including in obstetric population

Reference

1. Damrose EJ, Manson L, Nekhendzy V, Collins J, Campbell R. Management of subglottic stenosis in pregnancy using advanced apnoeic ventilatory techniques. Journal of Laryngology and Otology. 2019; 133: 399–403.