From: "ROOT" <root@sctimst.ac.in>
To: "ROOT" <root@sctimst.ac.in>
Date: 06/05/2025 07:49 AM
Subject: Invitation for CGR

Greetings from AIIMS, Rishikesh !!

The CGR will be held on May 6, 2025, in CPD Hall, AIIMS Rishikesh, from **8:00 AM to 9:00 AM**. You can join online through the following link:

Meeting link:
https://aiimsrishikesh.webex.com/aiimsrishikesh/j.php?MTID=m4976e18f958708ce43320fa8b0010889

Tuesday, May 6, 2025, 8:00 AM | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Meeting number: 2519 546 5341

Meeting password: 060525

Thanks & Regards
Regional Resource Centre
Dept of Telemedicine
AIIMS Rishikesh

CLINICAL GRAND ROUNDS

Department of Pulmonary Medicine (06-05-2025)

Name: Mr. A	**Age/Sex: 20/M** **UHID: 20240093787**	• **Residence: Bijnor, Uttar Pradesh** • **SES: Lower**

Case Presenter: **)r. Suyash Singh Rathore (Senior Resident)** **Department of Pulmonary Medicine,** **AIIMS Rishikesh.**	**Consultant in charge-** **Dr. Girish Sindwani, Professor** **HOD, Department of Psychiatry,** **AIIMS Rishikesh.**

Title:

An Unusual Cause of Benign Tracheal Stenosis Requiring Silicone Stent Placement

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Introduction:

Benign central airway obstruction (CAO) is a potentially life-threatening condition, most frequently resulting from post-intubation injury but can rarely be caused by blunt chest trauma. Management remains challenging, often requiring a multimodality, patient-specific approach.

Case Summary:

Patient Profile:
A 20-year-old previously healthy, non-smoker male.

Chief Complaints & Presentation:
Presented to the trauma emergency with sudden onset shortness of breath after a road traffic accident, with anterior chest and abdominal injuries.

Initial Evaluation:

At a peripheral center, the patient was intubated for low Glasgow Coma Scale and referred to our tertiary care center.

On arrival:

- **Screening USG:** Bilateral pneumothorax → bilateral ICDs placed.
- **FAST scan:** Normal.
- **Ventilator Settings:** FiO_2 100%, Vt 400 ml, RR 20/min, PEEP 6 cmH_2O.

Chest X-Ray:
Homogeneous opacity over right hemithorax, volume loss, tracheal shift to the right, bilateral ICDs in situ.

CT Thorax:

- Lower tracheal stenosis (~5 cm), up to carina.
- Complete right lung collapse with air bronchograms.
- Subcutaneous emphysema and bilateral pneumothoraces.

Investigations:

Routine blood investigations were within normal limits. Viral serologies were non-reactive. Coagulation profile normal.

Management:

Bronchoscopy:

- Done with 4.2 mm pediatric bronchoscope.
- Critical lower tracheal stenosis noted.
- Tracheal lumen narrowed unevenly anteroposteriorly; right side roomier than left.
- Right bronchial tree: Thick secretions suctioned.

Intervention:

- Balloon dilatation attempted → unsuccessful.
- A customized Novatech silicone stent (18 × 60 mm) placed via rigid bronchoscopy.
- Post-procedure chest X-ray showed improved aeration.
- Patient extubated next day.

Outcome:
Discharged after 2 days. At 2-month follow-up: asymptomatic, active, and planned for stent removal — done

uneventfully. Patient remains asymptomatic on regular follow-up.

Discussion:

Benign CAO, although most commonly post-intubation, can rarely follow blunt trauma leading to tracheobronchial injury, which may initially be missed. Tracheal stenosis from blunt trauma, when unamenable to surgical repair due to patient factors or local expertise limitations, may be managed endoscopically.

Silicone stents remain preferred in benign airway strictures due to removability and lower risk of granulation compared to metallic stents. However, complications like migration and secretion retention mandate close surveillance. No universally accepted guidelines exist for optimal stent removal timing, though literature suggests 2–12 months depending on healing and symptom status.

Our patient, a young male with traumatic tracheal stenosis, responded favorably to early stenting with successful removal at 2 months.

Take-Home Messages:

1. No universally accepted best modality exists for benign tracheal stenosis — management should be individualized.
2. Traumatic tracheal stenosis is rare, with limited literature guiding management.
3. Silicone airway stents can serve as a definitive non-surgical option in post-traumatic stenosis.
4. The timing of silicone stent removal lacks consensus; usually recommended between 2–12 months, tailored to patient recovery and resolution of primary pathology.