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## BACKGROUND

Tracheoesophageal fistula (TEF) is a congenital anomaly requiring surgical repair in the neonatal period. Although survival outcomes have improved, thoracotomy during infancy may lead to long-term musculoskeletal sequelae. Previous studies report that **up to 39% of children develop musculoskeletal deformities** such as scapular winging, scoliosis, and chest wall asymmetry **after thoracic surgery**. These structural changes may influence postural alignment during growth. We present a case of infantile torticollis and postural asymmetry associated with acquired rib fusion after neonatal TEF repair.

## CASE REPORT

### ▪ Patient & History

38 weeks | Male | TEF s/p TEF ligation & esophageal reconstruction via thoracotomy (neonatal period)

### ▪ Initial Presentation

Referred for suspected torticollis  
Head tilt to left | Chin rotation to right

### ▪ Clinical Course

[At independent ambulation]  
Noted asymmetric gait posture by caregiver  
Right shoulder elevation during walking

### ▪ Electrodiagnostic Study

No spinal accessory neuropathy  
No other peripheral nerve injury

### ▪ Initial Evaluation

Neck ultrasonography: no structural abnormality  
Management: Stretching exercise & Positioning therapy

### ▪ Physical Examination

Right scapular winging  
Trunk asymmetry

### ▪ Imaging Findings

[Rib series]: Acquired partial fusion of right 4th–5th ribs, probable post-thoracotomy change  
[3D Chest CT]: Mild superolateral deviation of right scapula  
No definite muscular asymmetry  
Confirmed rib fusion

### ▪ Clinical Interpretation

Torticollis & Scapular winging → Secondary d/t Structural thoracic asymmetry (rib fusion)

**Figure 1.**

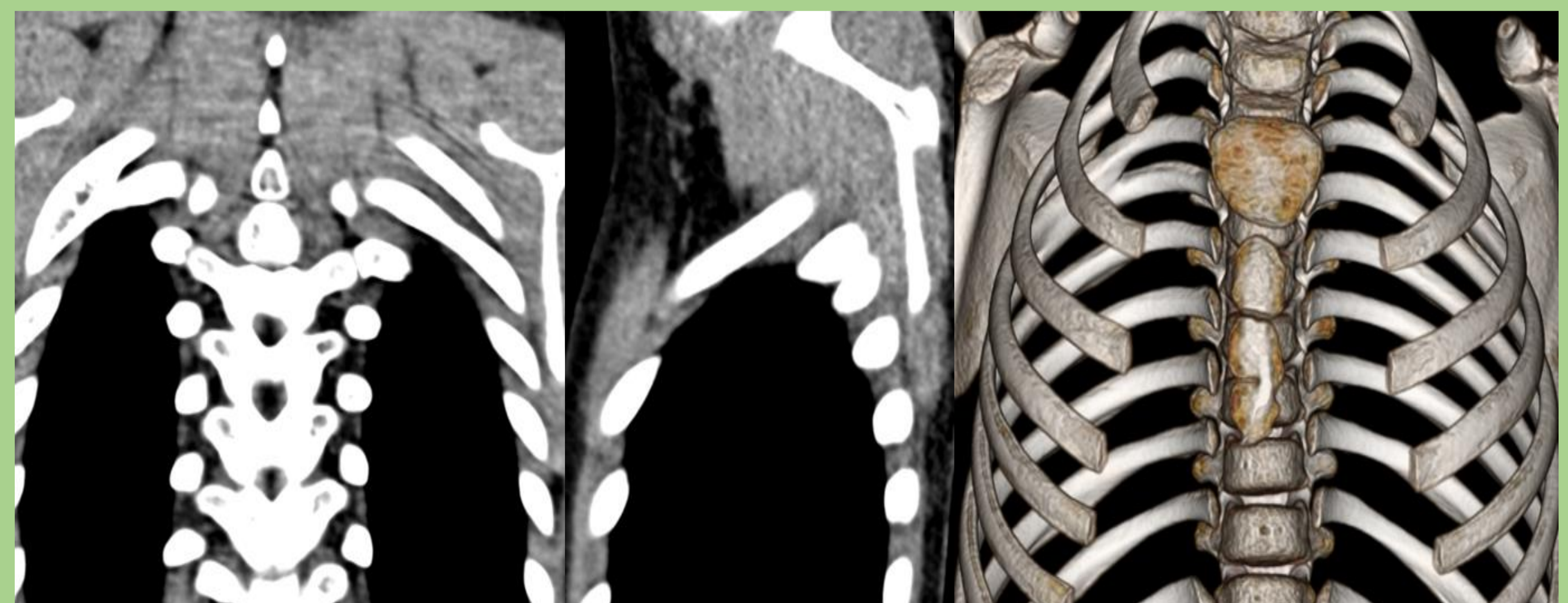
Clinical photograph demonstrating shoulder asymmetry in standing position



**Figure 2.** Rib series showing acquired partial fusion of the right 4th and 5th ribs



**Figure 3.** 3D chest CT: superolateral deviation of right scapula and partial rib fusion



## CONCLUSION

Thoracotomy for neonatal TEF repair may result in acquired rib fusion and thoracic cage asymmetry. Even in the absence of identifiable peripheral nerve injury, such structural alterations can contribute to infantile torticollis and later trunk asymmetry during growth. **Long-term musculoskeletal surveillance should be considered in children with a history of neonatal thoracic surgery** to detect postural sequelae that may impact motor development and alignment.