Greater rectal diameter was associated with greater trunk asymmetry, particularly in the thoracolumbar and lumbar regions, in children with functional constipation

INVESTIGATION OF TRUNK ASYMMETRY IN CHILDREN WITH FUNCTIONAL CONSTIPATION

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BACKGROUND & AIM

Functional constipation is a common pediatric gastrointestinal disorder. The abdominal muscles, diaphragm, and pelvic floor muscles work synergistically to maintain trunk control and contribute to effective abdominal pressure generation and coordinated defecation.

This study aimed to investigate the relationship between constipation severity and trunk asymmetry in children with functional constipation.

METHODS

PARTICIPANTS

n = 61 • Age: 10 (3.50) years • BMI: 18.54 (5.21) kg/m²
Rome IV functional constipation

01 RECTAL DIAMETER

Abdominal ultrasonography • Transverse rectal diameter

02 TRUNK ASYMMETRY

Adam's Forward Bend Test + Scoliometer®
ATR: thoracic • thoracolumbar • lumbar

03 SPINAL APPEARANCE

SAQ v1.1 • Appearance Subscale

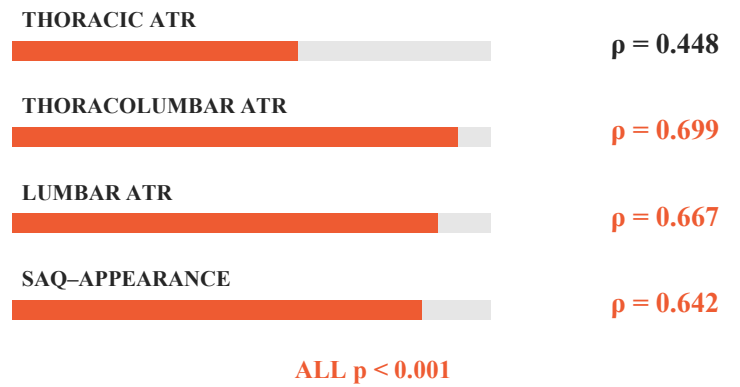
STATISTICAL ANALYSIS

Spearman correlation analysis

RESULTS

Rectal diameter was positively correlated with all trunk asymmetry measures (all $p < 0.001$).

CORRELATION WITH RECTAL DIAMETER



Strongest associations:
Thoracolumbar ATR (ρ=0.699) • Lumbar ATR (ρ=0.667)

CONCLUSION

Rectal diameter was moderately associated with trunk asymmetry, particularly in the thoracolumbar and lumbar regions.

These findings suggest that postural alterations may accompany increased fecal loading in children with functional constipation. Larger studies with multivariate analyses are needed to clarify causality.

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Ethics: 1st Clinical Research Ethics Committee (TABED), Ankara Bilkent City Hospital. Informed consent was obtained.

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