

Outcomes of Isolated Echogenic or Dilated Rectosigmoid in the Second Trimester in the Fetus

Indrani S, Vijayalakshmi R, Hathi V, Suresh S
Mediscan Systems, Chennai, India

Objective

The finding of an echogenic or dilated rectosigmoid without any bowel pathology is unusual in the second trimester and the natural history and outcomes not clearly known. This study was done to evaluate the outcomes of isolated echogenic or dilated rectosigmoid detected in the second trimester in the fetus.

Methods

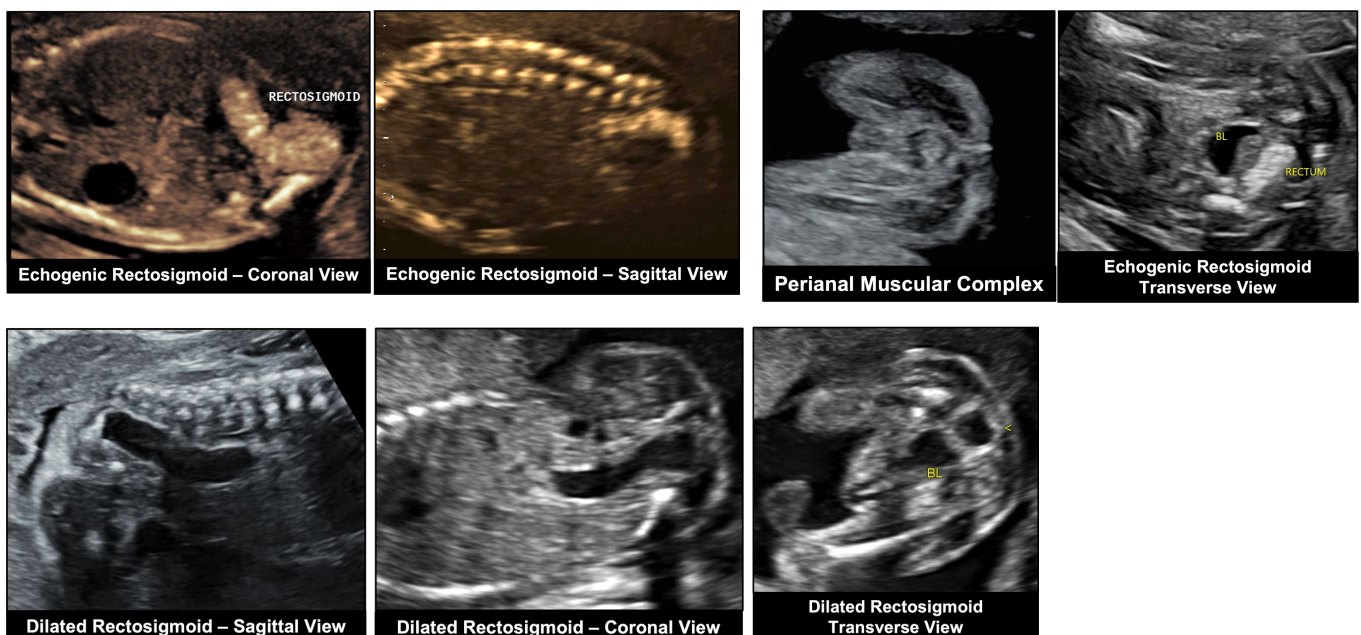
This was a retrospective analysis at a tertiary level fetal medicine centre in Southern India. Initial search identified all cases where an “echogenic”, “prominent” or “dilated” rectosigmoid was reported in the second trimester over a period of 11 years (01.01.2011 to 31.12.2021) from the electronic database. Images were reviewed and cases where the rectosigmoid was either echogenic or measured >95th centile for the period of gestation (dilated rectosigmoid) were included. Cases where the rectosigmoid appeared subjectively prominent but measured <95th centile were excluded. Those with associated anomalies of other organ systems, any identifiable bowel pathology at the initial visit or any other abnormal bowel pattern were excluded. The perianal muscular complex, if imaged satisfactorily, was documented. Images of the coronal and sagittal views of the rectum were reviewed. If antenatal follow-ups were available, the bowel pattern at follow-up was noted. Postnatal outcomes were collected telephonically based on a pre-set proforma.

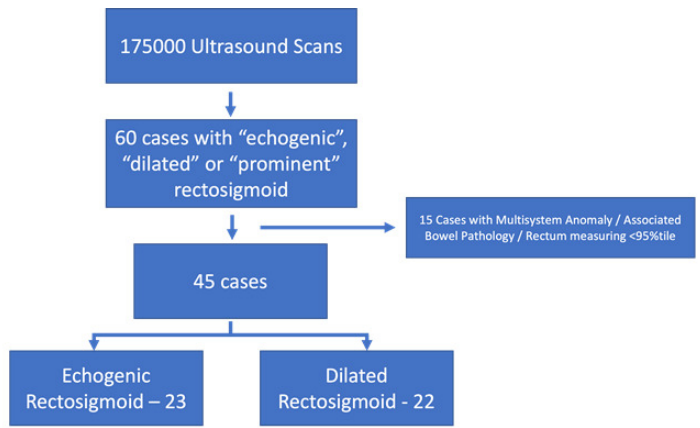
Results

The initial search revealed 60 cases out of a total of 175000 2nd trimester scans performed over the study period. After exclusion and image analysis, a total of 45 cases met the study criteria. Median patient age was 27 years. Mean gestational age at presentation was 20⁺⁴ weeks (17⁺³ weeks to 24⁺⁴ weeks). 23 of the cases had an echogenic rectosigmoid and 22 cases had a dilated rectosigmoid. Perianal muscular complex was imaged at presentation in 27 cases. In 18 cases where the PAMC was not imaged, the rectum was imaged in either the coronal or sagittal views. Antenatal follow-up was available in 31 cases and the rectosigmoid became normal with a normal bowel pattern on follow-up in either the second or third trimester in 28 of these cases. Postnatal outcome was available for 40/45 cases, and was normal in 39 (97.5%) cases. One case with echogenic rectosigmoid at initial visit developed prominent small bowel loops and echogenic pellets throughout the bowel in the third trimester. Perianal muscular complex was visualized and the rectum was visualized up to the sacral tip. There was intrauterine fetal demise at 34 weeks and autopsy revealed low anorectal malformation. Two cases, both with dilated rectosigmoid at initial presentation, one where the entire large bowel was echogenic on follow-up, and another with development of echogenic pellets throughout the large bowel, had a normal postnatal outcome.

Conclusion

Isolated finding of an echogenic or dilated rectosigmoid in the fetus resolves antenatally with a normal postnatal outcome in most cases. In addition to visualisation of the perianal muscular complex, imaging of the rectum beyond the sacral tip of spine in the presacral region and beyond the iliac wings in the coronal view provide additional pointers towards ruling out high anorectal malformations. Follow-up is warranted to look for changes in bowel pattern with advancing gestation.





At Presentation

- PAMC visualized – 27/45 (60%)
- Appropriate coronal view imaging – 38/45 (84.4%)
- Appropriate sagittal view imaging – 31/45 (68.9%)

Antenatal Follow-Up
31 / 45 (68.9%)

- Normal Rectosigmoid with normal bowel pattern – 28/31 (90.3%)
- Persistent Findings – 3/31 (9.7%)

Postnatal (or Autopsy) Outcome
40 / 45 (88.9%)

- Normal Postnatal Outcome – 39/40 (97.5%)
- Abnormal – 1 case Low Anorectal Malformation