

Limb–body wall complex in monochorionic diamniotic twins: early ultrasound diagnosis and management in a low-resource setting

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Background

Limb–body wall complex (LBWC) is a lethal congenital anomaly (~0.34/10,000 births), detectable from the first trimester.^{1,2} Discordant LBWC in MCDA twins is exceptionally rare and challenging to manage.³

Case report

A 39-year-old G4P5 with an MCDA twin pregnancy underwent first-trimester ultrasound showing a normal Twin A and an abnormal Twin B with a large anterior body-wall defect and severe spinal anomaly (figure1). Second-trimester ultrasound demonstrated thoraco-abdominal coelosomy with evisceration of the heart and liver, severe kyphoscoliosis, limb abnormalities, thoracic hypoplasia and a very short/absent umbilical cord, confirming LBWC (figure 2). Delivery was performed at 34 weeks’ gestation. A healthy neonate was delivered, while the affected twin died shortly after birth (figures 3).

Sonographic Hallmarks

- WALL → large thoraco-abdominal defect ± visceral evisceration
- SPINE → severe kyphoscoliosis / neural-tube defect
- CORD → very short or absent ± fetoplacental attachment
- ± LIMBS → reduction/ deformity abnormalities

Conclusion

LBWC can be recognized from the first trimester by its characteristic wall–spine–cord abnormalities. In discordant MCDA twins, early diagnosis enables appropriate counselling and individualized surveillance aimed at optimizing the outcome of the unaffected co-twin.

References

1. Bergman JEH, et al. Amniotic band syndrome and limb body wall complex in Europe 1980–2019. Am J Med Genet A. 2023; 191(4):995–1006. doi:10.1002/ajmg.a.63107.
2. Zhang L, Wang R, Zhao Y, et al. Characteristic Analysis of Ultrasound Diagnosis of Limb Body Wall Complex in Early Pregnancy. Prenat Diagn. 2025;45:1004–1012.
3. Wetzler S, Lantigua-M M, Brubaker SG, et al. Third trimester diagnosis of body stalk anomaly in a dichorionic diamniotic twin pregnancy. BMJ Case Rep. 2025;18:e264983.

Discussion

LBWC is a lethal developmental anomaly of uncertain pathogenesis, with abnormal embryonic folding, vascular disruption and amniotic rupture proposed as mechanisms.¹ Early ultrasound diagnosis relies on the characteristic association of a major body-wall defect, severe spinal deformity and a very short/ absent umbilical cord. Discordant LBWC in MCDA twins is exceptionally rare and poses a specific challenge because the prognosis of the unaffected co-twin must also be considered.² Early selective reduction has resulted in healthy term co-twin delivery in reported LBWC twin pregnancies; when fetal intervention is unavailable, as in our setting, expectant management requires individualized surveillance aimed at protecting the unaffected co-twin.

Key Differential Diagnoses

- Omphalocele → membrane-covered midline defect; cord inserts into sac
- Gastroschisis → paraumbilical defect; free-floating bowel; normal cord/ spine
- Pentalogy of Cantrell → supraumbilical defect + ectopia cordis + cardiac/diaphragmatic anomalies
- Amniotic band sequence → asymmetric disruptive defects ± visible bands



Figure 1. 1st trimester MCDA twins: T-sign & body-wall/spinal abnormalities in Twin B.

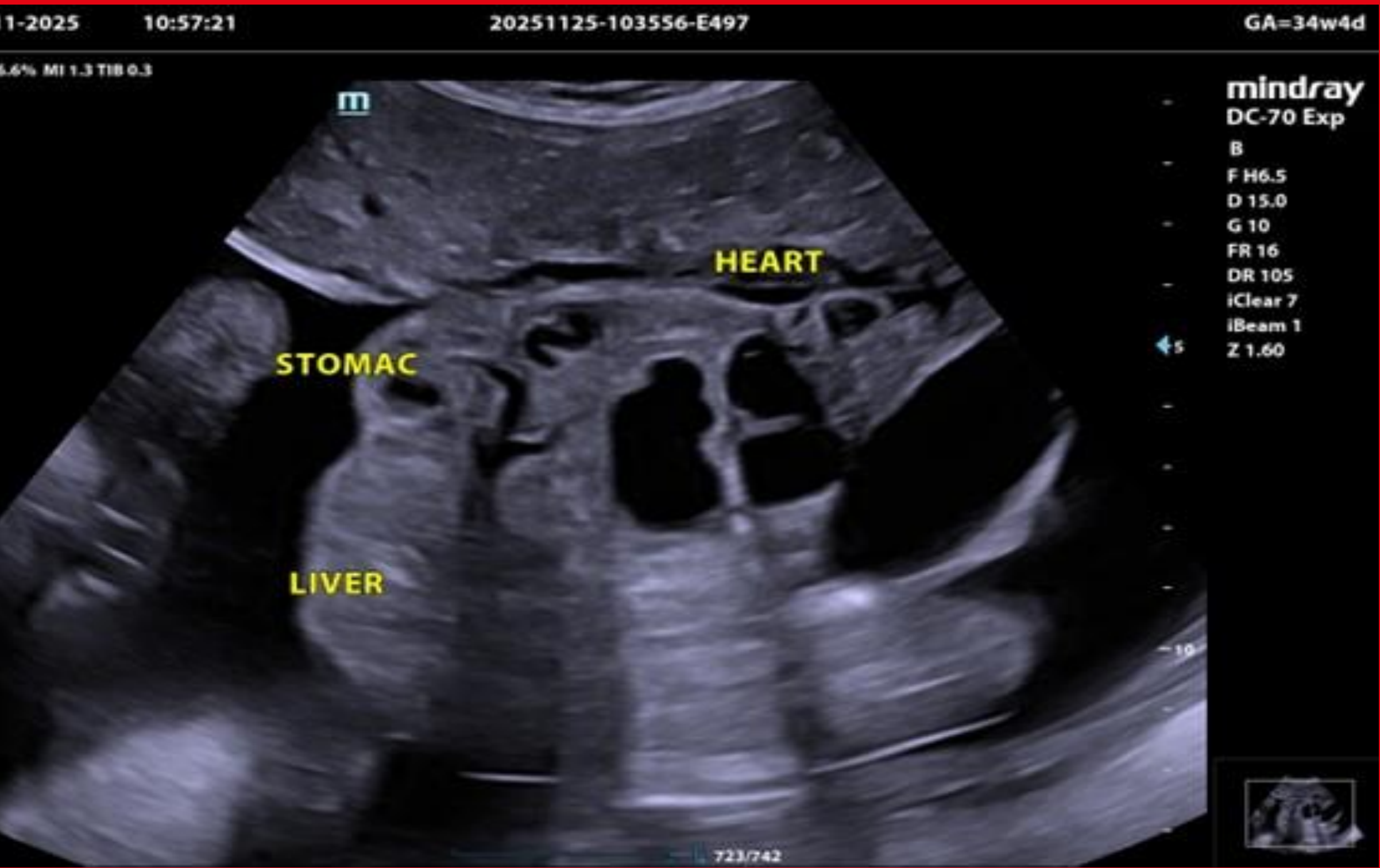
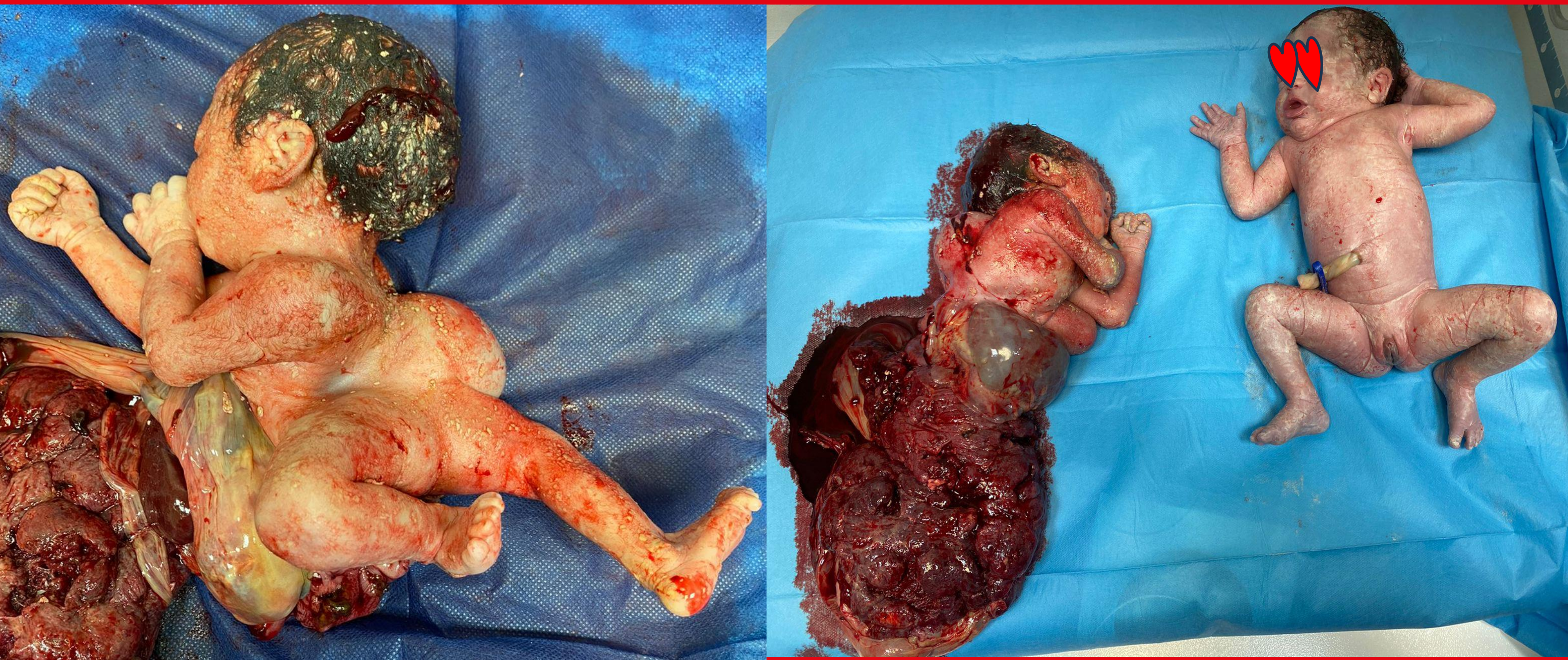


Figure 2. Antenatal ultrasound of Twin B showing thoraco-abdominal evisceration.



Figures 3. Postnatal comparison: LBWC-affected Twin B (left) and normal Twin A (right), with characteristic LBWC features.