We present a patient with complete chorioamniotic membrane separation (CMS) associated with bilateral clubfoot. Separation of the chorion and amnion before 14 weeks’ of gestation is physiologically normal. Any chorioamniotic separation that persists after 16 weeks is uncommon and anomalous. Extensive CMS can lead to miscarriage, fetal death, neonatal death, amniotic band syndrome, umbilical cord complications, and preterm delivery. A 35-year-old gravida 2, para 0 generally healthy woman presented at 15.1 weeks of gestation with CMS and bilateral club foot. Her past obstetric history included a dilation and curettage for early missed abortion followed by a hysteroscopy for a residua. Targeted US scans didn’t reveal additional anatomical findings. At 22 weeks of gestation, the CMS was significantly and amniocentesis was performed. Chromosomal microarray analysis was normal. Meticulous high risk follow up including targeted US scans for CNS, limb anomalies and amniotic band syndrome were performed. Follow up was uneventful till term delivery.

Our case report is the only case in the literature that describes the rare finding of complete spontaneous chorioamniotic membrane separation with bilateral clubfoot. After ruling out other anomalies associated on sonography or genetic findings in correlation with bilateral club foot, we assume that early complete spontaneous chorioamniotic membrane separation might be a major factor in the pathophysiology of bilateral clubfoot.