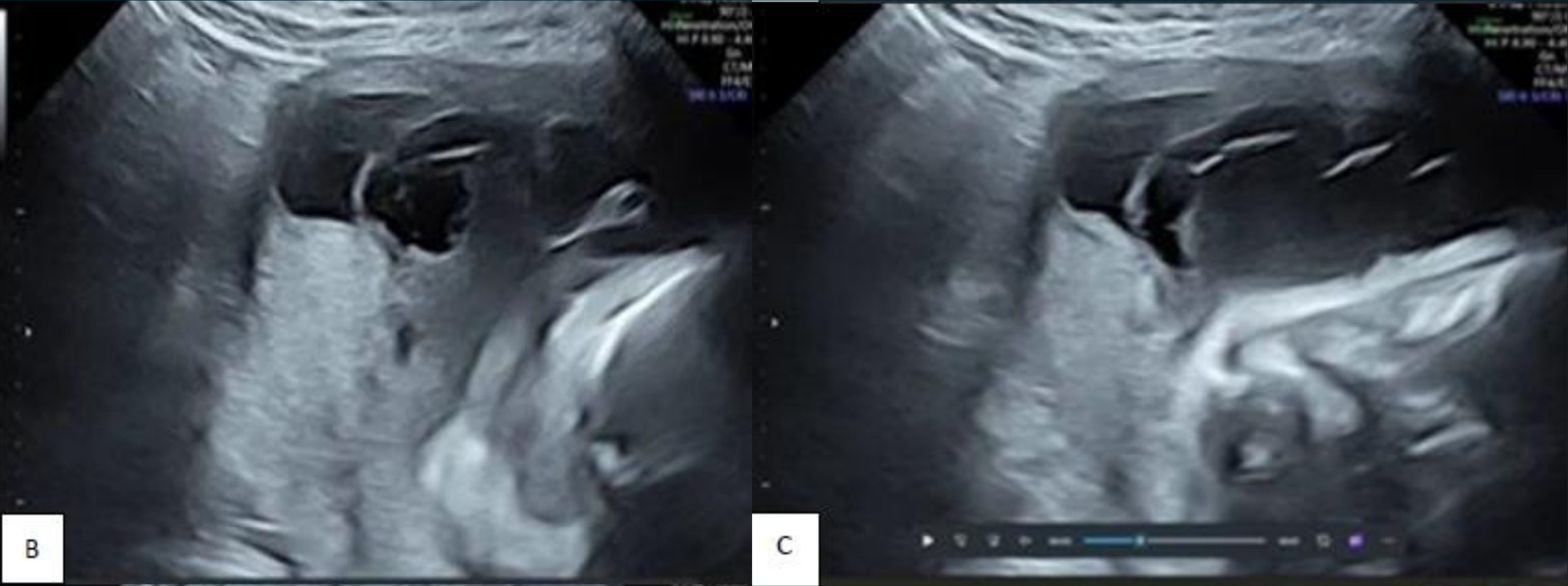


Spontaneous Chorio-amniotic Membrane Separation:
A Case Report and Review of the Literature
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Background : - The fetal membrane consists of two layers: the amnion and chorion, which typically fuse by 14–16 weeks of gestation. - Chorion-amnion separation (CAMS) after 16 weeks is abnormal and may result from invasive procedures, spontaneous events, or chromosomal abnormalities. - Complete CAMS (cCAMS) involves full separation of the membranes except at the umbilical cord insertion. - Iatrogenic CAMS is a known complication of fetal interventions and is associated with adverse outcomes such as preterm delivery, PPROM, and fetal demise. - Spontaneous CAMS (sCAMS) is extremely rare, with an unclear prognosis perinatal outcomes associated with it are ambiguous.	Antenatal Course Admitted at 29+4 weeks with severe pre-eclampsia; managed with antihypertensives, magnesium sulphate, and two doses of steroids. Monitored with 4-hourly cCTGs. Delivery: Emergency C-section at 29+4 weeks due to suspected fetal compromise on CTG. Postnatal Outcome: Prolonged NICU stay; birthmarks noted, possibly from amniotic bands. Placental Findings: Partial sCAMS; no cord occlusion. Histology showed maternal vascular malperfusion with accelerated villous maturation.	Discussion Adverse Outcomes: Chorio-amniotic separation (sCAMS) is linked to increased risks of preterm birth, structural anomalies, aneuploidy, amniotic bands, and intrauterine fetal demise (IUFD). Membrane weakness: Membrane separation reduces mechanical resistance; in iatrogenic CAMS (iCAMS), procedures disrupt membrane integrity, increasing susceptibility to preterm birth and infection. In sCAMS, a primary defect in membrane strength may lead to spontaneous separation. The avascular amnion relies on adjacent structures like the decidua for nutrients, making it vulnerable to weakening and separation in cases of intrinsic membrane defects. Skin and connective tissue disorders, including ichthyosis prematurity syndrome, epidermolysis bullosa with pyloric atresia, and restrictive dermopathy linked to abnormal skin development—may also impair fetal membrane formation due to their shared embryological origin with the amnion. Limb deformities (e.g., contractures, club feet) in sCAMS are often due to amniotic bands or restricted fetal movement caused by extrinsic compression from membrane separation.
Purpose: To present a rare case of spontaneous chorion-amnion separation (sCAMS) diagnosed in the third trimester along with its perinatal outcome, highlighting the need for further research and reporting to improve evidence-based management and patient outcome.	Scan images at 28 weeks showing partial chorio-amniotic membrane separation: Irregular amniotic sac with trabeculations and adhesions between amnion and chorion with some fine amniotic bands and encysted fluid between amnion and chorion. The amniotic fluid also appeared cloudy.	
Case report: 37-year-old woman, third pregnancy (previous two miscarriages), known to have PCOS, asthma, lymphedema, and a bicornuate uterus. Conceived spontaneously & closely monitored under preterm clinic due to uterine abnormality. Key Milestones: - Anomaly scan at 19+2 weeks was essentially normal. - Diagnosed with preeclampsia at 28+3 weeks. - Severe fetal growth restriction (EFW <1st centile) was observed, suspected to be secondary to placental insufficiency. - Referred to FMU cons for scan FMU Cons scan: sCAMS diagnosed via ultrasound at 28 weeks — partial separation with amniotic bands. EFW was <1st centile. Umbilical artery PI was above the 90th percentile. There were signs of marked redistribution. Liquor was reduced.	 References: - Govaerts J, Cryns P, Jacquemyn Y. Spontaneous chorioamniotic membrane separation discovered by preterm prelabor rupture of membranes. Clin Case Rep. 2019;7(4):762-5. - Bromley B, Shipp TD, Benacerraf BR. Amnion-chorion separation after 17 weeks' gestation. Obstet Gynecol. 1999;94(6):1024-6. - Wilson RD, Johnson MP, Crombleholme TM, Alan WF, Holly LH, Mary K, et al. Chorioamniotic membrane separation following open fetal surgery: pregnancy outcome. Fetal Diagn Ther. 2003;18(5):314-20.	Conclusions: - Spontaneous chorion-amnion separation (sCAMS) is associated with increased risks of preterm delivery and adverse perinatal outcomes, including amniotic bands, structural anomalies, aneuploidy, and IUFD. - As there are no large-scale studies and optimal follow-up guidelines for cases with sCAM, fetal heart rate monitoring and serial ultrasounds, may be considered for this high-risk population. - Current evidence is limited to case reports and small series. - This case aims to enhance recognition of sCAMS and underscores the need for increased reporting and research to better understand its pathophysiology, clinical implications, and to inform evidence-based management strategies. - Enhanced awareness may aid obstetricians in minimizing fetal and maternal risks. Contact information: Dr Pradnya Kamble, Mid and South Essex NHS Foundation Trust Pradnya.kamble1@nhs.net