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Umbilical cord haematoma in a preterm newborn

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Figure 1. Umbilical cord haematoma right after birth



Figure 2. Umbilical cord haematoma on the first day of life

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Figure 3. Umbilical cord haematoma on the 24th day of life



Figure 4. Remaining portion of the umbilical cord, after mummification and fall of the distal part of the cord (including haematoma)

Umbilical cord haematoma (UCH) is a spontaneous bleeding in the umbilical cord caused by the rupture of umbilical vessels with blood extravasation in the Warton's jelly. This condition is a rare complication of pregnancy (1:5000-11000 deliveries). UCH may cause fetal distress and it can be associated with stillbirth (50% of cases). For these reasons, close surveillance is required when diagnosed by antenatal ultrasound.⁽¹⁻³⁾

Various risk factors have been suggested such as cord anomalies, infection, coagulation disorder, post maturity, and iatrogenic-related (amniocentesis, fetal diagnostic procedures and *in utero* transfusion).⁽⁴⁻⁶⁾

A 31-year-old pregnant woman was admitted at 26 weeks of gestational age with preterm premature rupture of membranes (PPROM). Pregnancy was previously uneventful, without history of trauma or *in utero* procedures. A female preterm, weighing 887g, was born at 27 weeks and 6 days, by emergent cesarian section after marginal placental abruption. At delivery a brownish-purple non-tender swelling in the umbilical cord, measuring 2x2cm, was noted (Figure 1 and 2). Cord examination showed 3 vessels, without other abnormalities. Ultrasound scan excluded omphalocele and confirmed the hypothesis of UCH. Early blood tests excluded anemia, coagulation abnormalities or elevated acute inflammatory markers. Umbilical catheterization was not performed, and a peripheral vein catheterization was used instead.

The anatomopathological examination of the placenta and umbilical cord documented a well-defined saccular hematoma in the area adjacent to the cord insertion, diffuse acute chorioamnionitis, and funisitis. The newborn required systemic antibiotics for early neonatal sepsis. The umbilical cord stump evolved to mummification (Figure 3), with delayed fall on 30th day of life. Congenital hypothyroidism was excluded. The proximal portion of the umbilical cord remained moist (Figure 4) requiring application of silver nitrate for complete regression.

Most case reports in published literature describes spontaneous UCH in full-term newborns.^(2,7-10) In our case, a spontaneous UCH was found in a preterm newborn, with history of placental abruption, PPRM and histological chorioamnionitis and funisitis. The clinical suspicion was promptly confirmed, and potential complications were excluded.

Umbilical cord haematoma is a challenging prenatal diagnosis, requiring close surveillance when diagnosed by antenatal ultrasound, as compression of umbilical vessels may cause perinatal asphyxia and stillbirth.

The umbilical cord stump delayed fall related with UCH was previously described in literature.⁽⁹⁾ In our case, we believe the delayed fall of the umbilical cord stump was related with the presence of the voluminous UCH associated with risk factors, such as cesarean section, prematurity, very low weight at birth, and systemic antibiotic.

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REFERENCES

1. Sánchez-Códez MI, Lubián-Gutiérrez M, Méndez-Abad P. Umbilical cord hematoma. *Fetal Pediatr Pathol.* 2019;38(4):359-60.
2. Scutiero G, Bernardi G, Iannone P, Nappi L, Morano D, Greco P. Umbilical cord hematoma: a case report and review of the literature. *Obstet Gynecol Int.* 2018;2018:2610980. Review.
3. Nappi L, Trezza F, Bufo P, Riezzo I, Turillazzi E, Borghi C, et al. Classification of stillbirths is an ongoing dilemma. *J Perinat Med.* 2016;44(7):837-43.
4. Seoud M, Aboul-Hosn L, Nassar A, Khalil A, Usta I. Spontaneous umbilical cord hematoma: a rare cause of acute fetal distress. *Am J Perinatol.* 2001;18(2):99-102.
5. Morin LR, Bonan J, Vendrolini G, Bourgeois C. Sonography of umbilical cord hematoma following genetic amniocentesis. *Acta Obstet Gynecol Scand.* 1987;66(7):669-70.
6. Moise KJ, Carpenter RJ Jr, Huhta JC, Deter RL. Umbilical cord hematoma secondary to in utero intravascular transfusion for Rh isoimmunization. *Fetal Ther.* 1987;2(2):65-70.
7. Hooper KE, Sebire P. Spontaneous umbilical cord haematoma. *Arch Dis Child Fetal Neonatal Ed.* 2016;101(4):F332.
8. Arora PK, Mohandas S, McAndrew S, Karody V. Spontaneous umbilical cord hematoma. *J Pediatr.* 2017;184:233.e1.
9. Mota F, Oliveira N, Fonseca M, Mimoso G. Spontaneous umbilical cord haematoma. *BMJ Case Rep.* 2019;12:e229952.
10. Towers CV, Juratsch CE, Garite TJ. The fetal heart monitor tracing in pregnancies complicated by a spontaneous umbilical cord hematoma. *J Perinatol.* 2009;29(7):517-20.