

IMAGES IN CLINICAL PRACTICE

FOUR VESSEL UMBILICAL CORD

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KEYWORDS

Umbilical cord anomaly, 2 umbilical veins

A preterm girl was born at 34 weeks of gestation by vaginal delivery to primigravida mother aged 24 years. The baby weighed 2 kg at birth. The cause of preterm delivery was premature onset of labor pains. Baby cried immediately after birth. On routine general examination, it was found that umbilical cord had 4 blood vessels instead of routine 2 umbilical arteries and one umbilical vein (Figure 1). Other physical examination was normal. Ultrasound abdomen and echocardiography was normal. The hospital course was uneventful.



Which are the four vessel umbilical cord anomalies commonly seen?

Four vessel umbilical cord anomaly commonly seen are 2 umbilical arteries and 2 umbilical veins. This may be associated with multiple congenital malformations including congenital heart disease, genitourinary malformations, skeletal malformations, central nervous system malformations, cleft lip and fetal

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hydrops.¹ Usually single umbilical vein is present at birth and is derived from primitive left umbilical vein. Normally the right umbilical vein gets obliterated by 7 weeks of gestation.^{2,3} Rarely persistence of caudal part of right umbilical vein can lead to presence of 2 umbilical veins. Incidence of persistence of right umbilical vein has been seen in 0.2-0.4% cases.⁴ Persistent right umbilical vein without any additional malformations has a good prognosis. In our patient, there were no other major congenital malformations. There have been few case reports on four vessel umbilical cord with no associated malformations.^{5,6,7,8,9} Thus, routine examination of the umbilical cord postnatally for the number of blood vessels should be done and in case of multiple vessel cord, detailed examination and investigation to rule out any associated congenital malformations should be done.

Compliance with ethical standards

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