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### Relationship between newborn Acid-Base status and umbilical cord morphology

Marsosai V, Masoomi F


#### Abstract:

ess the relationship between umbilical cord blood gases at birth and morphology of umbilical cord, in a prospective study of 200 consecutive term delivery, we investigated the relationship between umbilical cord morphology characteristics (umbilical crd length, number of vascular coil, coiling index) and color of amniotic fluid and umbilical vessel blood gases. Statistically significant linear correlation was found between umbilical venous PH and the umbilical cord length ( $r=0.39$ , 95% CI 0.25, 0.53,  $P<0.03$ ), umber of vascular coils ( $r=0.45$  95% CI 0.31-0.59  $P<0.012$ ), and coiling index ( $r=0.34$ , 95% CI 0.12-0.48,  $P<0.04$ ), and also negative linear correlation was found between umbilical venous partial pressure of carbon dioxide & of coli ( $r=0.3$ , 95% CI  $-0.44$ ,  $-0.16$   $P<0.03$ ). No relation was found between umbilical cord indices and meconium staining of amniotic fluid.Placental weight also correlated with umbilical cord length ( $r=0.17$ , 95% CI 0.03-0.31,  $P<0.03$ ), but not with umbilical cord coils or coiling index.Umbilical venous pH is related to umbilical cord morphology but umbilical venous PCO2 was only related to the number of coils and umbilicat artery pH wa only related to the number of coils and not related to length or coiling index of umbilical cord morphology. The morphology of umbilical cord can affect maternal-fetal gas exchange

#### Keywords:

[Acid-base status](#) . [Umbilical cord morphology](#)

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