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GYNAECOLOGY
Case Report

# Pregnancy Outcome in Single Umbilical Artery

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## Abstract

The umbilical cord typically contains two arteries and one vein. Single umbilical artery (SUA) refers to a variation of umbilical cord structure in which there is only one umbilical artery. The incidence ranges from 0.5 to 6 percent of pregnancies.

SUA is an isolated finding in approximately 65 percent of affected fetuses in the remainder, aneuploidy with or without structural malformations and intrauterine growth restriction is.

We present 3 cases with (SUA),They was delivered by lower segment cesarean section at term Mainly due to repeated caesarean, Two babies was health and third one died due to congenital heart disease with feature of Turner Syndromes.

***Keywords:*** *SUA; Embryogensis; Ultrasound; Congenital Anomalies; Intrautrin growth redudation*

## Introduction

### Embryogenesis

The umbilical arteries develop from the allantois, a diverticulum of the yolk sac. Between 3 and 5 weeks of gestation, a transient common umbilical artery is normally present in all embryos, replacing a plexus of arteries around the allantois [1]. Subsequently, the common umbilical artery becomes shorter and right and left umbilical arteries advance within the body stalk, SUA can result from one of three mechanisms: primary agenesis of one of the definitive umbilical arteries, a secondary atrophy or atresia of a previously normal umbilical artery, or persistence of the common allantoic/umbilical artery [2].

### Incidence

The incidence of SUA may be increased in women of Eastern European descent and decreased in women of Japanese and African ancestry [3].

SUA is more common in twin pregnancies (3.9 to 8.8 percent) [4].

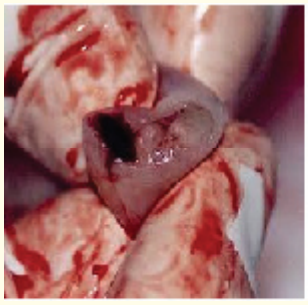
### Diagnosis

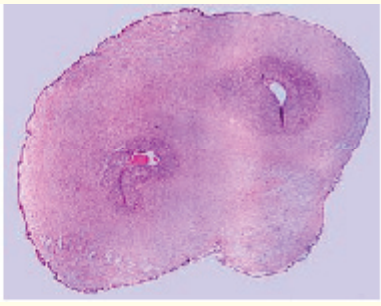
In the second and third trimesters, the American Institute of Ultrasound in Medicine recommends imaging of the umbilical cord during prenatal ultrasound examination and evaluating the number of vessels in the corde [5], but in routinely performed mid-trimester scans, only 30-67% of cases are identified. USG diagnosis is best done with color Doppler imaging [6].

## Case Report 1

A 24-year-old pregnant mulliparous woman p3+0 previous 3c/s. The maternal medical histories were uneventful, as well as the family history of Hypertension, her Antenatal care regular uneventful. The Ultrasonography was performed at 30 w gestation, estimated fetal weight is 1464 gm, Umbilical Doppler normal.

Patient had elective c/s at complete 38 w under spinal anesthesia out come alive male with clear liquor. Placental apparent normal weight 700 kg with single artery sent to Histopathological Examination. The infant discharge with mother care as normal healthy infant, no evidence of congenital abnormality. Histopathology of placenta and membrane are (Placenta with degenerative change and congenital vascular anomaly of umbilical cord with one artery).





## Case Report 2

A 35-year-old pregnant mulliparous woman P4+2 previous 3c/s The maternal medical histories were uneventful, as well as the family history of Hypertension and Diabetics Militias, her Antenatal care regular, With suspected fetus Small for gestation age, The Ultrasonography was performed at 30 w and 35 w gestation, confirm symmetrical intrauterine growth retardation, With liquor and umbilical Doppler was with no clear of soft marker seen at detailed u/s, Patient had emergency c/s at 37 w for fetal distress and previous 3 C/S under GA anesthesia outcome, alive female with me conium liquor, Baby weight 2,39 kg Apger score 5 & 7 & 9 @ 1 & 5 & 10 minute respectively.

Cord PH vein 7.252 cord PH artery 7.186 with single artery cord. Placental apparent small weight? kg With single artery sent to Histopathology Examination.

**Histopathology Examination Report**

Placenta with degenerative change and congenital vascular anomaly of umbilical cord with one artery. An infant weight 2.39 kg admitted to Nursery intensive care, Baby apparent short neck, widely nipples, Low set ear, low hair line, Echo done?? fallot teterology, Baby develop Respiratory distress syndrome With mechanical ventilation, died on day 3 with causes of death (Congenital Heart Diseases with features of Turners Syndroms), karyotype not available.

## Case Report 3

A 30 year-old pregnant nulliparous woman, Primegravida 38w +1d Unbooked, no antenatal, The maternal medical histories were uneventful, as well as the family history uneventful. Patient had emergency c/s under spinal anesthesia for fetal distress outcome, alive female with, Meconium liquor, baby weight 2.8 kg Apger score 4 & 8 @ 1 & 5 MIN respectively with single artery cord. Placental apparent normal small weight 300 kg with single artery. The infant discharge with mother care as normal healthy infant, no evidence of congenital abnormality.

**Histopathology Examination Report**

Placenta with degenerative change and congenital vascular anomaly of umbilical cord with one artery.

## Conclusion

Fetuses and neonates with single umbilical artery and isolated single umbilical artery are at increased risk for adverse outcomes. Identification of single umbilical artery is important for prenatal diagnosis of congenital anomalies and aneuploidy. Increased surveillance with isolated single umbilical artery may improve pregnancy outcomes.

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