TWISTED TALE OF UMBILICAL VEIN VARIX: CASE SERIES

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INTRODUCTION:

- **Umbilical vein varix (UVV) represents 4% of cord malformations**
- In ultrasound it appears as ovoid or elongated fluid filled mass between anterior abdominal wall and inferior edge of liver.
- UVV is sometimes associated **with structural or genetic abnormality, fetal growth restriction and at times mortality** with limited studies on management guidelines.

PATHOLOGY:

- The left umbilical vein enters the fetus runs along the inferior border of the liver. It joins the portal system making the umbilical–portal system and enters the inferior vena cava through ductus venosus.
- Inherent weakness or an unsupported intra abdominal portion of an umbilical vein makes it vulnerable to pressure changes, resulting in segmental dilatation of the vein

COMPLICATIONS:

- **Hydrops fetalis: ~5%**
- **Thrombosis** may occur occasionally
  Possibly from an associated cardiovascular anomaly
- Some fetuses may exhibit **SGA or. IUGR**
  hypothesis of limited oxygenated blood supply to the fetus

AIM OF STUDY:

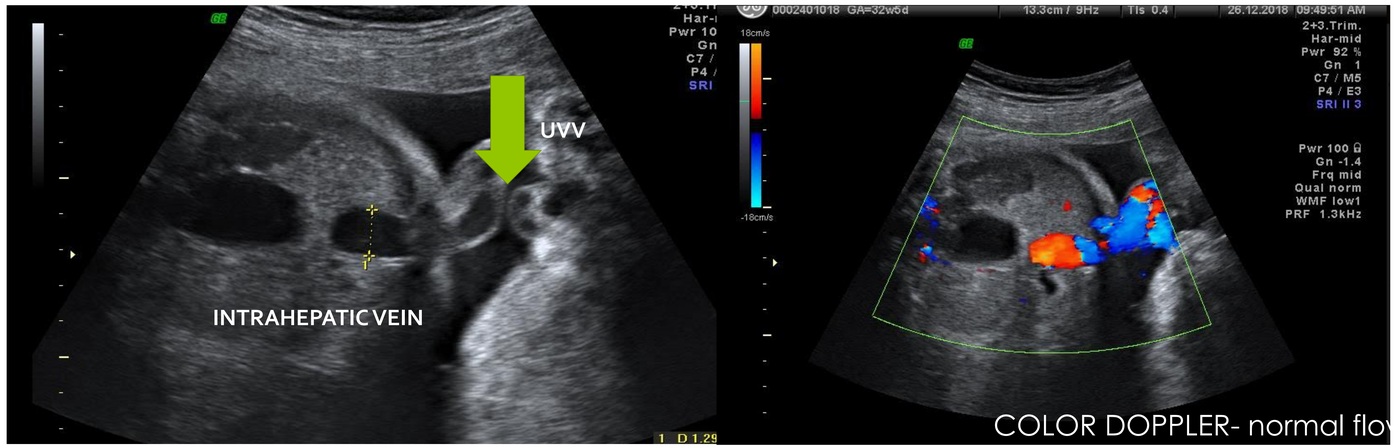
- Analyse various outcomes and associations of UVV and protocol for optimal management

MATERIALS AND METHODOLOGY:

- A total of 13 cases of UVV from period of Jan 2018 to May 2021 diagnosed at Sri Ramachandra Medical centre, Porur were taken for the study
- Type of study: **Prospective** study
- **DIAGNOSIS:**
- Diagnosis of UVV is made in ultrasound when focal **dilatation of more than 9mm or atleast 50%** larger than intrahepatic non dilated umbilical vein or exceeds **two standard deviation** for the gestational age.
- **Parameters** Gestational age at diagnosis and delivery, UVV maximum diameter, associalted anatomical abnormality, intrauterine growth restriction, outcome including mode of delivery and APGAR scores were studied

RESULTS:

- The mean gestational age at diagnosis of UVV was 27 weeks.
- 63% of foetuses were of male gender showing gender preponderance.
- 60% cases delivered vaginally (including one intrauterine fetal demise) and remaining 40% cases delivered by Caesarean section showing UVV is not an indication per se for Caesarean section .
- Mean gestational age at delivery was 37weeks. Preterm delivery was done when indicated for fetal growth restrictions.
- Mean birth weight was 3.12 +/- 0.3kg. There were two cases of intrauterine fetal demise one of which showed turbulence of UVV in prior scans.
- Two fetuses had cardiac anomalies and one fetus had intrauterine growth restriction.



CONCLUSION:

•UVV is a **rare** congenital condition that is usually associated with low frequency of other structural/genetic anomalies

•**Recommendations** for the management:

Complete **detailed anatomic scan** should be performed.

Fetal echocardiography should be offered.

Genetic consultation should be offered to all mothers with an **isolated** fetal intra-abdominal umbilical vein varix.

Amniocentesis should be recommended if **other anomalies** are detected.

USG **follow-up** using color Doppler imaging should be performed **every 2 weeks**, focusing on the size of the varix, the appearance of a clot, and signs of hydrops.

No indication for preterm delivery when fetal surveillance findings are completely normal.

Careful fetal workup and surveillance.

Neonatal ultrasound is advised to ascertain the diagnosis and to rule out an abnormal vascular connection

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