# Velamentous insertion of umbilical cord in twin pregnancy

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**Abstracts**: Lifeline of the fetus in the womb is umbilical cord and is not spared in having anatomical and functional variance. Velamentous insertion of umbilical cord is more common in twins (incidence 8.7%). Increased risk for intra uterine growth retardation, preterm birth, congenital anomalies and fetal bleeding is associated with it. Intrauterine diagnosis can help to improve the fetal prognosis. So we have presented a case of twin pregnancy with one cord have Velamentous insertion and the other has normal; increase of Monochorionic diamniotic placenta. Both baby were still birth. [ Raithatha N et al, NJIRM 2011; 2(4) : 121-123]

**Key Words**: Case Report, Velamentous insertion, umbilical cord

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**Introduction:** The umbilical cord is vital organ for growing fetus in the womb. Pathological conditions related to umbilical cord and placentas are very rare and frequently neglected in real clinical practice. Abnormal cord insertions have been associated with increased perinatal morbidity and mortality. Prevalence rates from the pathology literature of marginal cord insertions are7-9%in singletons and 24-33% in twins, where as for velamentous insertions the corresponding rates are the corresponding rates are 2% and10-16%, respectively (with higher prevalence in mono chorionic than in dichorionic twins).So, here we discuss about abnormal insertion of umbilical cord to placenta i.e.Velamentous insertion of umbilical cord in twin pregnancy

**CASE REPORT:** A 24-year-old G2P1A0L1 women with history of 8-month s amenorrhea (33weeks) came with labor pains and frank leaking [clear] per vagina. No history of bleeding pervaginum and No positive history suggesting PIH.

Trimesteric history: Diagnosed as a twin pregnancy at first trimester (outside). First and second trimesters were uneventful. Family History: Not significant. Past History: History of cervical en circlage had done as prophylactic measure at four months of amenorrhea. No history of any ovulation induction drugs usage.

General examination: Normal.
Obstetrics examination : S/o twin pregnancy with absent fetal heart sounds of both baby , per speculum examination show frank leaking (clear), Encirclage stitch seen and removed , on per vaginal examination :Cervix 1.5 cm dilated , 30% effaced , Pp vertex, membrane absent .

Investigation: laboratory parameter: Normal.
Ultrasonography: Twin pregnancy with both fetus IUFD with 33 weeks maturity, placenta
Fundo posterior, moderate oligo hydramnios
Delivery notes: Delivery uneventful. Admission delivery interval seven hours.
Both baby fresh stillborn without any malformation [ Figure no.I]

| | Baby 1 | Baby 2 |
|---|---|---|
| Weight | 1.1kg | 1.3 kg |
| Cord ( Length) | 41 cm | 43 cm (thick not uniform in diameter |
| Insertion | Central | Velamentous insertion |
| Placenta | Monochorionic diamniotic , 450gm, without retro and intra Placental clot, 10-15% calcification | |
| Post partum period | Uneventful and patient was discharged on fourth day | |

**Discussion:** The umbilical cord insertion the placental mass in about 99% of case. This is the condition in which the umbilical cord insertion the chorio-amniotic membranes rather than on the placental mass.[figure II] Therefore, a variable segment of the umbilical vessels runs between the

amnion and the chorion, losing the protection of the Wharton's jelly[1-3].

**Types:** 1) Insertio velamentosa or 2) Inserpositio velamentosa, depending on whether the umbilical arteries branch or not within the membranes, respectively[4]. 3) Vasa previa[3-5], occurs when the vessels traverse the fetal membranes below the presenting part.

**Incidence**:1.1% in singleton pregnancies and 8.7% in twin gestations[1]. Higher in monochorionic placentation when the placentas are fused1and even higher in early pregnancy; in spontaneous abortions it has been estimated to be 33% between the 9th and 12th weeks and 26% between the 13th and 16th weeks[4] . In 6% of singleton pregnancies with a velamentous insertion, vasa previa is a coexisting condition[6].

**Pathogenesis**: Several theories[1,4] have been postulated to explain this condition: 1)abnormal fixation of the yolk sac to the chorion; 2) insertion of the body stalk to a region of proliferating trophoblast other than the deciduas basalis; 3) abnormal primary implantation due to obliquity of the embryo during implantation; and 4) trophotropism: the umbilical cord is normally implanted but becomes abnormal because of central atrophy and unidirectional lateral growth of the chorion frondosum

**Diagnosis**: With the help of Color Doppler technology an accurate prenatal diagnosis of this condition can be easily made(meangestationalageis12weeks). Since the separating membrane has no detectable blood flow, the demonstration of flow in this segment of the twin placenta can be considered as a path gnomonic sign of velamentous insertion.

**Associated anomalies** : Varies from 5.9% to 8.5%[8,10] , include esophageal atresia, obstructive uropathies, congenital hip dislocation, asymmetrical head shape, spina bifida, ventricular septal defects, and trisomy21[8] . The possibility of a bi-lobed placenta[1,2] and single umbilical artery[14] must be considered.

**Prognosis include :** Increased risk for intra uterine growth retardation, preterm birth, congenital anomalies and fetal bleeding[3,6,7-10]. Vasaprevia: from75% to 100% fetal mortality rate[3,11] .

**Recurrence risk** : Not known to be increased.

**Management**: Depends on the location of the velamentous vessels; In the lower segment : caesarean section to avoid the risk of vasaprevia; above the lower segment: standard obstetric al management[9]. A complete anatomical survey, including fetal echocardiography, and serial ultrasound examinations for fetal growth must be offered.

Fig: 1

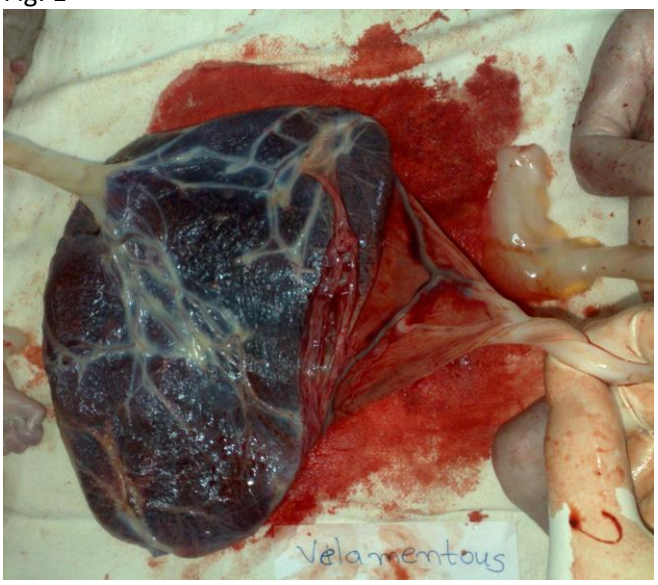
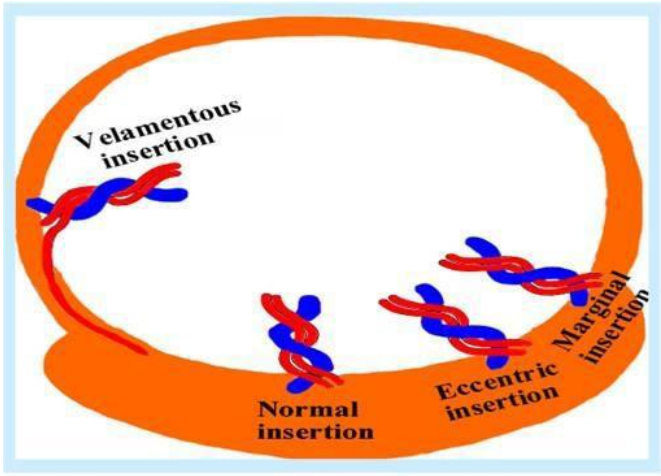



Fig: 2

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