

## **Amniotic band attached to fetal head –a rarest site of amniotic band presentation causing umbilical cord strangulation and fetal demise: case report**

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**Abstract:** Amniotic band syndrome is an uncommon pathological condition that can lead to intrauterine fetal demise .We report an unusual case of amniotic band presentation attached to fetal head in which umbilical cord got strangulated and resulted to fetal loss.

**Key Words:** amniotic band syndrome, umbilical cord, strangulation

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### **I. INTRODUCTION**

Amniotic band syndrome is an uncommon congenital pathological condition that may lead to malformation and fetal death. Strands of amniotic sac ensnares parts of fetal developing body parts leading to several problems. Amniotic bands occur in 1 of every 1,200-15,000 births and are demonstrable in 1-2% of malformed infants [1]. Nearly 10% of cases include umbilical cord strangulation [2]. Here we report an unusual case of amniotic band syndrome where the amniotic band was attached to fetal head and the twisting of umbilical cord around this fibrous band led to decrease fetal movement, fetal distress ultimately leading to fetal demise in second trimester, at 23 weeks.

### **II. CASE REPORT**

A 33-year-old registered G2P0A1 presented with decreased fetal movement at 23 weeks of gestation, carrying a level II USG, detecting no congenital anomaly. She had previous one miscarriage at 9 weeks of gestational age not followed by D&C. There was history of hypothyroidism for which she was already taking thyroxine 50 microgram daily. On examination: fundal height was 22-24 weeks, FHS could not be localised with stethoscope therefore an urgent USG was done and FHR was found to be 50-60 beats /min, which got disappeared within 2-3 minutes. Termination of pregnancy was done with prostaglandin E2 and a 560gm still born, female embryo was delivered along with placenta in toto. On examination of the fetus a band of membrane measuring 4.5cm in length was found between placenta and fetal scalp (parieto-temporal junction of foetal skull). The umbilical cord was found to be entangled to the band. CRL (crown rump length) was 22cm. The placenta weighed 210gm and measured 13x8x3cm, while umbilical cord measured 32cm and its architecture was normal with three vessels.

### **III. DISCUSSION**

Amniotic constriction band was first described by Montgomery in 1832. Although there are many theories, like the intrinsic model proposed by George Streeter in 1930, vascular theory proposed by Van Allen in 1981 but the most widely accepted theory, the extrinsic model was proposed by Torpin in 1965 who suggested that early amnion rupture might be the cause [3]. The most common problems that are associated with amniotic band syndrome are cleft lip/palate and clubbed foot. Associated anomalies may occur in approximately in 40-60% of cases. Usually there are no abnormalities of internal organs. Prevalence varies depending upon whether the abortions secondary to ABS have been figured or not. It is believed to be the cause of 178 in 10000 abortions. ABS is more commonly present among African Americans as compared with Caucasians [4]. ABS occurs randomly, it is not genetic, with amniotic banding no two cases are alike. Only rare cases of intrauterine foetal death by constriction of the umbilical cord have been described in literature, mostly in the second and third trimester [5,7]

The incidence of intrauterine fetal death from ABS involving umbilical cord is not known but a number of cases have been reported (Graf et al. 1997; Kanayama et al. 1995; Torpin 1965). Constriction of umbilical cord is very rare and as in our case, the site of presentation being rarest may lead to extreme difficulty in making diagnosis by antenatal sonography. Antenatal diagnosis of ABS is frequently difficult and is accurately

diagnosed in only 29% to 50% of cases [6]. Once diagnosed sonographically, umbilical cord constriction may be amenable to foetoscopic release in an attempt to avert fetal death. Fetoscopic release of umbilical cord amniotic band using YAG laser fibre has been reported[2].

#### REFERENCES:

- [1]. Garza A, Cordero JF, Mulinare J. Epidemiology of the early amnion rupture spectrum of defects. *Am J Dis Child* 1988; 142: 541–544
- [2]. Peiro JL, Carreras E, Soldado F, Sanchez-Duran MA: Fetoscopic release of umbilical cord amniotic band in human fetus: *Ultrasound Obstet Gynecol*. 2009 Feb; 33: 232-234.
- [3]. Torpin R Amniochorionic mesoblastic fibrous rings and amniotic bands: associated constricting fetal malformations or fetal death. *Am J Obstet Gynecol* 1965; 91: 65-75.
- [4]. Goldfarb CA, Sathienkijanchai A, Robin NH. Amniotic Constriction Band: A Multidisciplinary Assessment of Etiology and Clinical Presentation. *J Bone Joint Surg Am*. 2009; 91 Suppl 4: 68-75
- [5]. Reles A, Friedmann W, Vogel M, Dudenhausen J: Intrauterine fetal death after strangulation of umbilical cord by amniotic band. *Geburtshilfe Frauenheilkd* 1991; 51: 1006-1008.
- [6]. Chandran S, Lim MK, Yu VY. Fetal acalvaria with amniotic band syndrome. *Arch Dis Child Fetal Neonatal Ed* 2000; 82, F11-F13
- [7]. Lurie S, Feinstein M, Mamet Y: Umbilical cord strangulation by an amniotic band resulting in a stillbirth: *J Obstet Gynaecol Res* ,34:255-257



Figure 1. cord entangled between the fibrous band



Figure 2: fibrous band after separation of umbilical cord.