

# Umbilical cord torsion: a rare cause of intrauterine fetal death

*Göbek kordonu torsiyonu: intrauterin fetal ölümün nadir görülen bir nedeni*

Atin Halder, Sailesh Ray, Saswati Halder

*Department of Gynaecology and Obstetrics, N. B. Medical College, Sushrutanagar, Deorjeeling W.b, India*

## Abstract

Umbilical cord torsion is an extremely rare cause of intrauterine fetal death. Prenatal Ultrasonography can recognize torsion of the umbilical cord. We may avoid such a disaster by early diagnosis.

(J Turkish-German Gynecol Assoc 2009; 10: 128)

**Key words:** Umbilical Cord, Torsion, Intrauterine Fetal Death

**Received:** 13 February, 2009 **Accepted:** 20 March, 2009

Umbilical cord serves a vital function, but unfortunately it is susceptible to different types of congenital and acquired abnormalities leading to jeopardy of fetal health.

Cord accidents may be responsible for as high as 5% of fetal demises (1). Umbilical cord torsion is an extremely rare cause of intrauterine fetal death (2). We present a case of intrauterine fetal death at 29 weeks, due to torsion of the cord.

A 24 year gravida 2, para 1 with previous CS 4 years previously, at 29 weeks of gestation was admitted with loss of fetal movement for 7 days and abdominal pain.. She had a history of less fetal movement for the first time 10 days earlier and subsequent ultrasonography revealed a single live fetus of 27 weeks and fundal maturity grade II placenta with adequate liquor. She lost her fetal movements again 7 days earlier and ultrasonography confirmed intrauterine fetal death.



**Figure 1**

## Özet

Göbek kordonu torsiyonu anne karnında fetal ölümlerin nadir bir sebebidir. Prenatal ultrasonografi kord torsiyonunu saptayabilir. Felakete sonuçlanan bu durumdan erken tanı ile kurtulabiliriz.

(J Turkish-German Gynecol Assoc 2009; 10: 128)

**Anahtar kelimeler:** Göbek kordonu, torsiyon, intrauterin fetal ölüm

**Geliş Tarihi:** 13 Şubat 2009 **Kabul Tarihi:** 20 Mart 2009

She waited for 7 days as advised by her house physician for spontaneous expulsion of the fetus. When she had severe pain, she was admitted to our hospital.

Examination findings revealed tachycardia (PR-100/min) with scar tenderness. Her cervix was firm with closed os. Caesarean section was performed.

After opening the abdomen, we found that the lower segment was thinned out having only intact peritoneal coat, indicating partial rupture. The placenta was mildly adhered to the uterus and severe torsion of the umbilical cord (Figure 1&2) was observed. We removed the placenta manually and closed the uterus in layers.

Umbilical cord torsion has been reported to be an uncommon cause of intrauterine fetal demise. Although initially described more than 300 years ago, relatively few cases have been de-



**Figure 2**

scribed in the literature in the last 50 years (2). It may result from fetal movement during which the cord normally become twisted. But recent reports have shown familial clustering. Such intrafamilial clustering suggests that a genetic predisposition for umbilical cord torsion may exist (3). Umbilical cord torsion has usually been regarded as secondary to fetal death or cord constriction or due to lack or abnormality of Wharton's jelly (4). Umbilical cord torsion, in the absence of predisposing constriction or abnormality of Wharton's jelly, can obstruct the umbilical blood vessels and cause intrauterine death (5). In our case torsion without abnormality of Wharton's jelly was observed. Prenatal ultrasonography can recognize torsion of the umbilical cord. If the vein-to-vein pitch is <2 cm, torsion may be associated 6. Cardiac failure can occur with umbilical cord torsion and can present as nonimmune hydrops. So the present report may serve to facilitate understanding of such undesirable cord accidents by detailed prenatal scanning of cord structure to avoid such a disaster.

## References

1. Hadar A, Hallak M, Single Umbilical Artery and Umbilical Cord Torsion Leading to Fetal Death: A Case Report *Reprod Med* 2003; 48: 739-40
2. Weber J. Constriction of the umbilical cord as a cause of fetal death. *Acta Obstet Gynecol Scand* 1963; 42: 259-68.
3. Bradley W, Bakotic, DO; Theonia Boyd, et al. Recurrent Umbilical Cord Torsion Leading to Fetal Death in 3 Subsequent Pregnancies: A Case Report and Review of the Literature. *Archives of Pathology and Laboratory Medicine*: 2000; 124: 1352-5
4. Glanfield PA, Watson R. *Arch Pathol Lab Med*. Intrauterine fetal death due to umbilical cord torsion. 1986; 110: 357-8
5. Hallak M, Pryde PG, Qureshi F, Johnson MP, Jacques SM, Evans MI. Constriction of the umbilical cord leading to fetal death. A report of three cases. *J Reprod Med*. 1994; 39: 561-5
6. Collin JH. Prenatal observation of umbilical cord torsion with subsequent premature labor and delivery of a 31-week infant with mild nonimmune hydrops. *Am J Obstet Gynecol*. 1995; 172: 1048-9.

## CONGRESS CALENDAR

- |                      |   |
|----------------------|---|
| 28 June-1 July 2009  | <b>ESHRE</b><br><i>Amsterdam, Netherland</i><br><a href="http://www.eshre.com/ESHRE/English/Annual-meeting/Amsterdam">http://www.eshre.com/ESHRE/English/Annual-meeting/Amsterdam</a> |
| 9-12 September 2009  | <b>SLS</b><br><i>Boston, USA</i><br><a href="http://www.sls.org">http://www.sls.org</a>   |
| 13-17 September 2009 | <b>ISUOG</b><br><i>Hamburg, Germany</i><br><a href="http://www.isuog.org">http://www.isuog.org</a>  |
| 1-4 October 2009     | <b>UTD</b><br><i>Gloria Golf, Antalya</i><br><a href="http://www.utd.org.tr/anasayfa">http://www.utd.org.tr/anasayfa</a>  |
| 4-9 October 2009     | <b>FIGO</b><br><i>Cape Town, South Africa</i><br><a href="http://www.figo.org/congress">http://www.figo.org/congress</a>  |
| 17-21 October 2009   | <b>ASRM</b><br><i>Atlanta, USA</i><br><a href="http://www.asrm.org/Professionals/Meetings/annualmeeting">http://www.asrm.org/Professionals/Meetings/annualmeeting</a>                 |
| 21-24 October 2009   | <b>National Urogynecology Confrencec</b><br><i>Istanbul</i><br><a href="http://www.urogynecology2009.com">http://www.urogynecology2009.com</a>  |
| 28-30 October 2009   | <b>ESGE (the European Society of Gynaecological Endoscopy)</b><br><i>Florence, Italy</i><br><a href="http://www.esge.org">http://www.esge.org</a>                                     |
| 4-7 November 2009    | <b>MEFS</b><br><i>Cairo, Egypt</i><br><a href="http://www.mefs.org">http://www.mefs.org</a>   |
| 12-15 November 2009  | <b>COGI</b><br><i>Beijing, China</i><br><a href="http://www.comtecmed.com/cogi/beijing">http://www.comtecmed.com/cogi/beijing</a>   |
| 16-18 November 2009  | <b>AAGL</b><br><i>Florida, USA</i><br><a href="http://www.aagl.org/annual-meeting">http://www.aagl.org/annual-meeting</a>   |
| 10-12 December 2009  | <b>Fertility and Preservation (ISFP)</b><br><i>Brussels-Belgium</i><br><a href="http://www.isfp-fertility.org/pdf/FSA-Brussels">http://www.isfp-fertility.org/pdf/FSA-Brussels</a>    |