

## TRIDISCOIDAL PLACENTA

DUBRAVKO HABEK<sup>1</sup>, IVAN ANTONIO MILETIĆ<sup>1</sup>, FILIP MEDIĆ<sup>1</sup>, ROKO HABEK<sup>2</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Sveti Duh University Hospital, School of Medicine, Catholic University of Croatia, Academy of Medical Sciences, Zagreb, Croatia; <sup>2</sup>Karl-Franzens-Universität Graz, Graz, Austria; University of Novi Sad, School of Medicine, Novi Sad, Serbia

Tridiscoidal placenta is a biontologically developing morphovascular placental anomaly that is divided from one homogeneous discoid structure into three symmetric or asymmetric parts due to complete or incomplete separation of the placental parenchyma with sufficient circulatory arborization. We present a rare case of tridiscoidal placenta for the first time after spontaneous preterm birth at 31 weeks of high-risk pregnancy.

**Key words:** placenta, anomalies

**Address for correspondence:** Professor Dubravko Habek, MD, MS, PhD  
Department of Obstetrics and Gynecology  
Sveti Duh University Hospital  
Sveti Duh 64  
10 000 Zagreb, Croatia  
Tel: 00385 1 3712 187; fax: 00385 1 3745 534  
E-mail: dhabek@unicath.hr

Tridiscoidal placenta is a biontologically developing morphovascular placental anomaly that is divided from one homogeneous discoid structure into three symmetric or asymmetric parts due to complete or incomplete separation of the placental parenchyma with sufficient circulatory arborization. The placental discs are separated but symbiotic, unlike the completely separated parts of the placenta, when it is called placenta duplex/triplex (1), or bidiscoidal/tridiscoidal (2). It is believed that there are less than 2.2% of such dividing anomalies of the placenta, and multipartite multidiscoidal, thus tridiscoidal placentas are extremely rare (1-3).

We encountered a rare case of tridiscoidal placenta for the first time after spontaneous preterm birth at 31 weeks of high-risk pregnancy. The course of pregnancy was complicated after the previous four lost pregnancies and cervical cerclage in 20<sup>th</sup> week of pregnancy. A live male preterm neonate 1690/40, Apgar score 8/8, was born in breech presentation, and then a complete tridiscoidal placenta with two separated parts with one interposed, resembling lobes and thyroid isthmus or the H-letter (Figs. 1 and 2). The histopathologic finding of tridiscoidal placenta was normal for gestational age.



Fig. 1. H-like tripartite placenta – maternal side.



Fig. 2. H-like tripartite placenta – fetal side.

Although this possibility of morphological anomaly is mentioned in embryological textbooks, there is no work on the topic of 'tripartite placenta' in the Medline database, and only one work by Sudha *et al.* on the topic of 'trilobate placenta', which the authors associated with abnormal fetal heart rate (4). Tridiscoid placenta has clinical value in cases of possible defective placenta, tearing and retention of part of the placental tissue, causing complications such as early postpartum hemorrhage (3), so the ICD index classifies it under 043.19: Other placental malformations.

In our very rare biontological case, there were no prenatal sonographic signs of multipartite structure of the placenta, and the course of pregnancy and childbirth proceeded without possible links to this placental anomaly, which was not functional but morphological, like the H letter or thyroid-like.

## R E F E R E N C E S

1. Dudek RW. Embryology. 16<sup>th</sup> edition. Philadelphia, Wolters Kluwer Health, 2011; 65.
2. Singh I. Human Embryology. 10<sup>th</sup> edition. New Delhi-London, India-UK: Jaypee, 2014; 33-4.
3. Joshi VV. Handbook of Placental Pathology. 3<sup>rd</sup> edition, New York-Tokyo, USA-Japan: Iganu-Shoin Publisher, 1994; 86.
4. Sudha C, Schifrin B, Suzuki K. Trilobate placenta and an abnormal fetal heart rate pattern. Am J Obstet Gynecol 1973; 116: 878-80.

## S A Ž E T A K

### TRIDISKOIDNA POSTELJICA

D. HABEK<sup>1</sup>, I. A. MILETIĆ<sup>1</sup>, F. MEDIĆ<sup>1</sup>, R. HABEK<sup>2</sup>

<sup>1</sup>Klinička bolnica Sveti Duh, Klinika za ginekologiju i porodništvo; Katoličko sveučilište u Hrvatskoj, Medicinski fakultet, Zagreb, Hrvatska; <sup>2</sup>Sveučilište Karl-Franzens Graz, Austria; Medicinski fakultet, Sveučilište u Novom Sadu, Novi Sad, Srbija

Tridiskoidna posteljica je biontološki razvojna morfovaskularna anomalija posteljice s homogenom strukturom parenhima podijeljenog u tri simetrična ili asimetrična dijela nastala zbog potpune ili nepotpune separacije posteljičnog parenhima sa suficijentnom cirkulacijskom arborizacijom. Prikazujemo vrlo rijedak slučaj tridiskoidne posteljice nakon prijevremenog porođaja u 31. tjednu visokorizične trudnoće.

**Ključne riječi:** posteljica, anomalije