

# TEHNIKA CARskega REZA PRI PLODOVIH Z IZJEMNO NIZKO PORODNO TEŽO

## TECHNIQUE OF CESAREAN SECTION IN EXTREMELY LOW BIRTH WEIGHT INFANTS

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**Ključne besede:** tehnika carskega reza; transport in utero; izjemno nizka porodna teža

**Izvleček** – Izhodišča. Porodnišnica Ljubljana je perinatalni center tretje ravni. Od leta 1984 dalje, ko je bil v Sloveniji uveden transport in utero (TIU), se dve tretjini slovenskih plodov z izjemno nizko porodno težo rodi v porodnišnici Ljubljana, kamor ob sumu na prezgodnji porod premestijo nosečnice iz drugih porodnišnic. Ob dobro uveljavljenem TIU je prevoz otrok z izjemno nizko porodno težo (tj. po rojstvu) iz drugih porodnišnic na oddelek za intenzivno nego in terapijo novorojenčkov postal izjema.

**Material in metode.** Po podatkih Nacionalnega perinatalnega informacijskega sistema Slovenije se je v Sloveniji od 1. 1. 1990 do 31. 12. 1999 rodilo 816 plodov s porodno težo pod 1000 gramov, med temi 144 (17,6%) s carskim rezom. V raziskavi smo anketirali 20 ginekologov v porodnišnici Ljubljana o tem, kako izvajajo carske reze pri plodu z izjemno nizko porodno težo, in pregledali popise porodov ploda z izjemno nizko porodno težo s carskim rezom v porodnišnici Ljubljana od 1. 1. 1990 do 31. 12. 1999.

**Rezultati.** Ker je TIU dobro uveljavljen, se je v porodnišnici Ljubljana rodilo 529 (64,8%) od teh 816 plodov z izjemno nizko porodno težo, od tega 113 (21,4%) s carskim rezom. Pri 42% carskih rezov je šlo za dokončanje poroda pri spontano začetem porodu zaradi fetalnega distresa, 4% je bilo s carskim rezom končanih induciranih porodov, 54% primerov pa je bilo elektivnih carskih rezov (vodilni indikaciji preeklampsija in IUGR). Pri načrtovanju carskega reza pri plodu z izjemno nizko porodno težo je bistveno, da pred operativnim posegom ocenimo plodovo stanje in z mislijo na izvedbo carskega reza naredimo ultrazvočni pregled, pri katerem ocenimo položaj ploda in posteljice, zato da poteka operacija čim nežneje za plod (najpogostejše so poškodbe kože in mišičja, živčnih pletežev, zlomi kosti in možganske krvavitve) in da je obolevnost mater po carskem rezu čim manjša. Carski rez ne reši popolnoma problema travme pri porodu, ker je spodnji segment uterusa debel, ker je ustava ploda pogosto nepravilna in je ekstrakcija drobnega ploda z večjim obsegom glavnice kot trebuha v nepravilni ustavi pogosto težka.

**Zaključki.** Bistvene razlike pri tehniki carskega reza pri plodu z izjemno nizko porodno težo so: večja laparotomija, da pridobimo dovolj prostora za nežno ekstrakcijo ploda, incizija fascije nad incizijo kože, incizija miometrija v zgornjem delu spodnjega segmenta uterusa, po potrebi podaljšana v obliki črke J lateralno navzgor, to je ekstrakcija ploda z intaktnimi ovoji skupaj s posteljico (tj. en caul).

**Key words:** cesarean section technique; transport in utero; extremely low birth weight

**Abstract** – Background. The Department of Perinatology in Ljubljana is a third level perinatal centre. Since the introduction of transport in utero (TIU) in Slovenia in 1984, two thirds of Slovene extremely low birth weight infants are delivered in Ljubljana, where pregnant women with suspected preterm delivery are transferred from other maternity units. As TIU is well established, postnatal transport of extremely low birth weight infants from other maternity units to Neonatal Intensive Care Unit in Ljubljana became an exception.

**Material and methods.** By means of the National Perinatal Information System of Slovenia it was found that 816 infants weighting less than 1000 g were born in Slovenia from 1. 1. 1990 to 31. 12. 1999, among whom 144 (17.6%) by a cesarean section. We made a survey among 20 gynecologists at the Department of Perinatology in Ljubljana on the technique they apply in a cesarean section with extremely low birth weight infants, and reviewed the labour records of extremely low birth weight infants, delivered by a cesarean section in the Department of Perinatology in Ljubljana from 1. 1. 1990 to 31. 12. 1999.

**Results.** Due to TIU, 529 (64,8%) out of the 816 extremely low birth weight infants were born at the Department of Perinatology in Ljubljana, 113 (21.4%) of them by a cesarean section. In 42% of cases cesarean section was performed after a spontaneous onset of labour because of fetal distress, in 4% it was performed in induced labours, and 54% were elective cesarean sections (the leading two indications being pre-eclampsia and IUGR). With a planned cesarean section in extremely low birth weight infants the preoperative evaluation of fetal condition and an ultrasound examination determining the position of the fetus and the placenta are of utmost importance in order to perform a cesarean section with the minimal trauma to the infant (the most frequent are injuries of skin and muscles, neural plexus injuries, bone fractures and intracerebral hemorrhage), and the minimal morbidity of the mother. Cesarean section does not entirely solve the problem of delivery because of thick lower segment of the uterus, frequent malposition of the fetus and frequently difficult extraction of the tiny little malpositioned fetus with head circumference much greater than abdominal circumference.

**Conclusions.** The key steps in the technique of a cesarean section in extremely low birth weight infants are the following: larger laparotomic incision in order to have enough place for a gentle extraction of the fetus, incision of fascia above the skin incision, miometrial incision in the upper part of lower uterine segment, with the J-extension if needed, fetal extraction »en caul«, i.e. delivery of the intact gestational sac together with unruptured membranes and the placenta.