

ULTRASOUND GUIDED TRANSABDOMINAL CEPHALOCENTESIS Ultrason eşliğinde transabdominal sefalosentez

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Summary: Hydranencephaly, which is an extreme degree of hydrocephalus makes the normal birth impossible due to cephalopelvic disproportion. Rupture of the uterus is a danger and may occur before complete dilation of the cervix. Moreover a cesarean section is needless because of poor fetal prognosis. We presented a case detected by ultrasonographic examination during labor and managed with ultrasound guided transabdominal cephalocentesis. The fetus was in breech position and after the cephalocentesis procedure a normal vaginal birth took place without a complication. We recommend this simple procedure to be performed liberally in such cases in order to avoid needless obstetric operations and complications.

Key Words: Hydranencephaly, Hydrocephalus, Cephalocentesis

Özet: Hidranensefali bir çeşit dev hidrosefali olup, ortaya çıkan baş-pelvis uygunsuzluğu normal doğumu olanaksız hale getirir. Uterus rüptürü olası bir tehlikedir ve tam servikal açıklık oluşmadan evvel meydana gelebilir. Bu durumda kötü fetal prognozdan dolayı sezaryen ile doğum gereksizdir. Bu yazıda doğum eylemi sırasında ultrasonografik inceleme ile hidranensefali bir fetüs tespit edilen ve ultrason eşliğinde transabdominal sefalosentez ile fetal başın küçültüldüğü, daha sonra herhangi bir komplikasyon gelişmeden makadi doğum gerçekleştirilen bir vakayı sunuyor ve gereksiz obstetrik operasyonlardan ve komplikasyonlardan kaçınmak için bu tür vakalarda bu basit işlemin daha sık hatırlanması ve uygulanmasını öneriyoruz.

Anahtar Kelimeler: Hidranensefali, Hidrosefali, Sefalosentez

Among fetal anomalies the rate of the central nervous system abnormality is high and almost all cases are wanted to be diagnosed prenatally for the improvement of their prognosis (1). Hydrocephalus occurs in about 1 in 2000 fetuses and accounts for about 12 percent of all severe malformations found at birth (2). When serious cerebral malformations of the fetal cerebrum are diagnosed, the pregnancy in most cases is advanced and they appear late in the second and early in the third trimester (3,4). Hydranencephaly is partial or complete absence of the cerebral hemispheres with replacement of fluid. In another word this condition is an extreme degree of hydrocephalus. The incidence is unknown. Its prenatal diagnose is possible when a fluid-filled fetal head and an incompletely formed falx cerebri

appear on ultrasonographic examinations (5,6). Here we present a case of hydranencephaly which was detected during labour and managed by ultrasound guided transabdominal cephalocentesis

CASE REPORT

A 22-year-old woman, gravida 2, para 1 was admitted on labour. The cervical dilatation and effacement were 3 cm and 60 % respectively. The fetus was in breech position with intact membranes. The patient has not received antenatal care and did not recall the exact date of the last menstrual period. On the transabdominal ultrasonographic examination the biparietal diameter was 155 mm. The ventricles were excessively dilated and the falx cerebri was incompletely formed. The placenta was on the left anterior wall of the uterus. Because of the patient did not have a contracted pelvis a normal vaginal birth was planned after an ultrasound guided transabdominal cephalocentesis. After

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the bladder was emptied and the skin cleaned, a 17-gauge needle was inserted toward one of the enlarged ventricles of the fetus under the ultrasonic guidance and 1100 cc. of serohaemorrhagic cerebrospinal fluid was removed. When the biparietal diameter decreased to 95 mm. the procedure was stopped. After 5 hours the membranes ruptured spontaneously and a 3100 gr, 52 cm, female fetus was delivered in breech position. The apgar scores were 3 and 5 and the fetus also had a small meningomyelocel. There was no maternal complication and the patient was discharged on the first postpartum day. The baby died on the second postpartum day.

DISCUSSION

During an excessive accumulation of cerebrospinal fluid in the ventricles of the brain, the circumference of the head may exceed 50-80 cm whereas the normal fetal head circumference at term ranges between 32 cm and 38 cm. The volume of cerebrospinal fluid is usually between 500 and 1500 ml. In a fetus with hydrocephalus, as much as 5 L. fluid may accumulate. Breech presentation is found in

about one third of the cases. Whatever the presentation is, gross cephalopelvic disproportion is the rule, with serious dystocia. Rupture of the uterus is a danger and may occur before complete dilatation of the cervix. Most often the size of the head must be reduced to anticipate a normal vaginal delivery. Even during the cesarean delivery cerebrospinal fluid may be removed just before incising the uterus in order to prevent dangerous extensions of a low transvers or vertical incision (2).

Cephalocentesis technique varies depending on the fetal presentation. In cephalic presentation it can be performed transvaginally. But in breech position it is wiser to perform it transabdominally. In order to make the procedure safer and easier this can be done under ultrasound guidance. Ultrasound guided transabdominal cephalocentesis was first performed by Osathanondh (7) in 1980. It is a simple procedure without serious complication and in obstructed labours due to a hydrocephalic fetus can easily be performed demonstrated in our case this procedure will prevent needless cesarean sections and obstetric complications such as trauma to the birth canal or uterine rupture.

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