Accidental Intrauterine Ventriculography during Termination of Mid Trimester Pregnancy by Boero Technique

P. Miller, S. Grinstein, G. Gogol and J. Simon

Departments of Obstetrics and Gynecology and of Radiology, Hillel Yaffe Memorial Hospital, Hadera, Israel

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Summary. A case is presented in which during an attempt to perform amniography before injection of hypertonic saline solution for termination of mid trimester pregnancy, a fetal ventriculography resulted, with demonstration of the whole subarachnoidal space. Diagnostic procedures by amniocentesis and amniography are reviewed and the authors express the hope that procedures for the antenatal diagnosis of central nervous system malformations will be developed.

Ventriculographie intra-utérine accidentelle par technique de Boero

Résumé. Présentation d’un cas de ventriculographie fœtale accidentelle lors d’une tentative d’amniographie avant injection d’une solution salée hypertonique. Les auteurs espèrent que se développeront des techniques de diagnostic prénatal des malformations du système nerveux central.

Zufällige intrauterine fütale Ventrikulographie in einem Fall von Schwangerschaftsunterbrechung durch Boerotechnik


During a recent German measles epidemic in this country it was found necessary to terminate a large number of pregnancies. Many of these women were in the second trimester of pregnancy, the time when the method of choice for termination of pregnancy is the intra amniotic injection of a hypertonie solution [8, 9].

In order to prevent the complications arising from extra amniotic injection of the hypertonic saline and to confirm the positioning of the needle in the amniotic cavity, we decided to perform and amniography before injecting the solution.

Method

After emptying the bladder, cleansing the skin and the local infiltration of an anesthetic, a 14 bore needle was introduced into the amniotic cavity, 5 cm below the uterine fundus in the midline. After aspiration of 5—10 ml of fluid, 40 ml of a radiopaque agent (50% Triognost) was injected and an X-ray was taken, which showed the amniotic cavity, the size and position of the fetus, as well as the localization of the needle. Following that, approximately 250 ml of 30% hypertonic saline solution was injected into the amniotic cavity.

Case Report

A 29 year old woman, para 2, gravida 6, was admitted in the 24th week of pregnancy for therapeutic abortion following serologically proven German measles in the third month of pregnancy.

Discussion

There is a trend today for antenatal diagnosis and therapy based on amniocentesis. The indications for this procedure include studies for sexing and determination of sex linked hereditary disorders [10, 16, 17], biochemical examination of the amniotic fluid in Rh-incompatibility [7, 11], placental function tests and evaluation of fetal maturity [2, 3, 4, 12], and diagnosis of malformations of the central nervous system [6]. In addition this procedure is utilized in order to perform amniography prior to intrauterine blood transfusion in Rh-incompatibility [18], for localization of the placenta [1, 19], for amniotic fluid volume determination [5, 14], and for studies of the motility and congenital anomalies of the gastrointestinal tract [13, 15].
The case reported demonstrates the possibility of visualizing the cerebrospinal fluid space in utero. Considering the efforts being made to diagnose congenital developmental anomalies of the central nervous system and considering our chance demonstration of the whole cerebrospinal fluid space, we hope that suitable diagnostic procedures will be found in the future which will enable diagnosis of these anomalies before birth.

References