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REPORTING IN PERINATAL AUTOPSIES

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Review
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Abstract

The aim of fetal pathology is to clarify the processes related to pregnancy and childbirth, to estimate the gestational age, to document the development of the fetus, to determine the underlying anomalies and to give information about the results of maternal-fetal treatments. Reporting consists of clinical history, macroscopic examination, microscopic examination and diagnose. Causes of intrauterine death; chorioamnionitis, asphyxia, Placental abruption, major anomalies, chromosomal defects, severe intrauterine growth retardation, diffuse infarct in placenta, hydrops fetalis, subependimal hemorrhage, amniotic band sequence and transfusion in twins.

Key Words: Fetal autopsy, Autopsy reporting, Intrauterine death.

Özet

Fetal patolojinin amacı, gebelik ve bebek doğumuyla ilgili süreçleri netleştirmek, gebelik yaşını tahmin etmek, fetüsün gelişimini belgelemek, altta yatan anomalileri belirlemek ve maternal-fetal tedavilerin sonuçları hakkında bilgi vermektir. Raporlama klinik öykü, makroskopik inceleme, mikroskobik inceleme ve teşhisten oluşur. İntrauterin ölüm nedenleri; koryoamniyonit, asfiksi, plasental abrupsiyon, majör anomaliler, kromozomal bozukluklar, şiddetli intrauterin gelişme geriliği, plasentada yaygın enfarktüs, hidrops fetalis, subependimal kanama, amniyotik bant dizisi ve ikizlerde transfüzyon olarak bilinmektedir.

Anahtar Kelimeler: Fetal otopsi, Otopsi raporlama, Intrauterin ölüm.

1. Introduction

The aim of fetal pathology is to clarify the processes related to pregnancy and child birth, to estimate the gestational age, to document the development of the fetus, to determine the underlying anomalies and to give information about the results of maternal-fetal treatments (Kotiloğlu, 2005). Perinatologist need autopsy information to guide their patients to future pregnancies and to confirm their antenatal diagnosis. This information can determine the risk of recurrence and allow subsequent pregnancies to begin with the appropriate schedule. If the infants are born alive and die in the newborn period, the clinician stil needs an autopsy to know its maturation, confirm the diagnosis during the infant's life, determine the cause of death and the complications of the treatment. Thus, fetal autopsy advises families and clinicians by advising on reproductive losses (Aksoy,1994; Keeling, 1993; Wigglesworth, 1984). Another benefit of perinatal autopsies is the control mechanism of perinatology units. Autopsy results reveal whether antenatal diagnostic tests, fetal therapy and selective termination are in place (Macpherson, 1992). Fetal autopsy involves recording external features, taking photographs, radiological examination, examination of internal organs, diagnosing macroscopically anomalous fetus and writing pathology report.

2. Materials and Methods

This review is organized with the guideline of the Pediatric and Perinatal Pathology Working Group of the Federation of Pathology Associations and literature. Reporting according to the guideline it consists of clinical history, macroscopic examination, microscopic examination and diagnose.

3. Results and Discussion

The clinical history includes the mother's age, her pregnancy problems, family history, the date and cause of termination of pregnancy, birth and neonatal period.

This information is obtained from the clinician and indicated in the report. In the macroscopic examination section, the weight of the fetus, the crown-heel length, crown-rump length, head circumference and the foot length are measured, and the gestational week is consistent with these findings. If gender is detectable, indicated in the report. Skin, head, body, extremity examination findings are reported in the report. Thoracic cavity examination: all organs such as lungs, thymus, heart, thyroid is weighed and weights are written and findings detected on

cross-sectional faces are indicated. The number of lobes of both lungs is described. A sample is taken from each organ for microscopic examination and the block numbers and numbers are indicated in the report. The sample taken from the rib is saved. Findings detected during cardiac dissection are stated in the report. If there is any finding on the face of the section after dissection, it is written. The abdominal cavity examination; weights of organs such as liver, spleen, pancreas, right and left kidney, right and left adrenal glands are recorded and findings detected on cross-section alfa cesare recorded and the block number and number of samples from each organ are specified in the report. Testis/ovary, small intestine and bladder is indicated if there is a feature. The head cavity is opened, and the brain is removed, weighed and the findings detected on the cross-section alfa cesare described. The number and block number of samples taken for microscopic examination. The weight, dimensions of the placenta, the condition of the membranes, the umbilical cord and the characteristics of the cross-section alfa cesare indicated in the report. Samples taken from placental face, maternal face and umbilical cord and block numbers are indicated in the report. Microscopic examination of the thorax, abdominal organs and brain tissue of all samples taken from the findings are written. In the light of all the see macroscopic and microscopic findings, the diagnosis of the fetus is presented in a separate section. Causes of intrauterine death; chorioamnionitis, asphyxia, Placental abruption, major anomalies, chromosomal defects, severe intrauterine growth retardation, diffuse infarct in placenta, hydrops fetalis, subependymal hemorrhage, amniotic band sequence and transfusion in twins (Kotiloğlu, 2005). Fetal autopsy is considered as important as karyotype analysis and prenatal ultrasonography in comparative studies in the literature. In the study of Açıkalın et al., 2150 autopsy cases, congenital malformations are the most common cause of perinatal deaths with a rate of 68.2%. Causes of death; congenital malformations 1169 (68.2%), placental factors 277 (16.2%), no pathologic findings 94 (5.5%), intracranial hemorrhage 56 (3.3%), meconium aspiration 52 (3.1%), intrauterine growth retardation and related problems 33 (1.9%), infection 18 (1.0%), twin-twin transfusion 14 (0.8%) were found to be (Açıkalın, 2014). Horn et al. of 310 still births study found placenta and umbilical cord pathologies in 60% of cases, congenital malformation in 17.1%, intrauterine infection in 2.2% and traumatic lesion in 1.3% (Horn et al., 2004). In the review of 382 autopsy cases, Ekin et al. Congenital anomalies 45%, anoxia 27%, infection 10%, intracranial hemorrhage 3%, hydrops fetalis 3%, twin pregnancy complication 2%, pulmonary hemorrhage 1%, autolysis due to undefined 19%.

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