

65. PLACENTAL FINDINGS AS CAUSE OF NEONATAL DEATHS

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Object: The most well-known causes of death in neonate are prematurity, immaturity, low birth weight, infection and abnormalities. In this paper I studied the causes of death, until 28 days of birth, in a neonatal department. In each case, I checked the clinical record and carried out placental pathology. The cases studied in this paper were in the neonatal department, meaning that I had access to full records and materials.

Materials: I checked 37 neonatal death cases in a neonatal unit clinically and with placental pathology examination.

Results: The deaths occurred between 0-days and 28-days. Deliveries were between 22 gestational weeks and 40 gestational weeks, with the average being 28 weeks.

The causes of death according to the clinical records were abnormalities - 9 cases

placental dysfunction and immaturity - 22 cases

severe infection—6 cases

The causes of death according to placental pathology were

Dysmature villi - 11 cases

Maternal floor vessels abnormality - 12 cases

Chorioamnionitis or deciduitis –10cases

Conclusions: In this study I confirmed the clinical findings that the deaths of neonatal had three main causes; the first was immaturity and fatal shock at delivery, the second was abnormality, and the third was infection. Immaturity and fatal shock means that the baby could not develop. Abnormality meant that there were problems with the heart, lungs, liver, and other organs. Infection complicate with, before and after birth.

What this study found through placental pathology was dysmature villi, immature villi and vessels abnormalities. These pathological pictures prove the clinical findings, because abnormal villi is mainly associated with fatal abnormality, and maternal floor vessels abnormality associated with hypoxia of baby which leads to fatal and neonatal distress.

66. HOW EXAMINATION OF THE PLACENTA IN PREGNANCY LOSS CAN HELP WITH FUTURE OUTCOMES

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Object: Pregnancy loss is a big issue for everyone involved. If pregnancy loss occurs repeatedly, we call it recurrent pregnancy loss and in Japan, it is treated at a special clinic. At that time records from previous placental pathology is a necessity for identifying the possible causes and, if the pathology is the same, possible treatments.

Using placental pathology is the initial key to understanding the situation and the next steps to take. After placental pathology examination we can check previous data and add results from the new examination. The role of the pathologist is sometimes underestimated, but the findings of the pathologist can be very important, and the ability to explain the causes of pregnancy loss to the clinician and family is vital.

In this paper we show the causes of pregnancy loss classified by placental pathology.

Material

1 We examined 56 placentas from cases of pregnancy loss in 12 to 21 gestational weeks in a general hospital. We later re-checked and classified these initial examinations, adding more details.

2 We examined 20 placentas from cases of pregnancy loss in 12 to 21 gestational weeks in a specialist clinic. As well as the usual placental pathology, this included a number of other specialist examinations.

Results: Out of 56 cases, we found maternal floor vessels abnormality - 12 cases

CAM and deciduitis - 14 cases

Dysmature villi - 15 cases

Cord problems - 7 cases

Hemorrhage of decidua - 6 cases

Breus' mole - 1 case

From these 56 cases, several were recurrent.

In the special clinic all cases were recurrent and had special examinations, such as ureaplasma culture, microarray for bacterial detection, and coagulation examination.

Conclusions: Finding the cause of recurrent pregnancy loss is very important, and contributing to successful pregnancy and safe, healthy birth is our ultimate aim. For this reason, considering the vital part that placental pathology can play, we suggest that all hospitals examine the placenta from cases of pregnancy loss in more detail.

67. MATERNAL VASCULAR MALPERFUSION(MVM) AS A CAUSE OF CHRONIC LUNG DISEASE (CLD)

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Object: The most well known cause of chronic lung disease (CLD) is Subacute necrotizing Chorioamnionitis(SNC). There are a great number of reports and papers that show how SNC leads to Cytokine release syndrome (CRS) and damage to the lungs in newborns. However, clinically, we see many cases of CLD without Chorioamnionitis (CAM) in very low birth weight babies (VLBW). In this paper, I will confirm the causes of CLD in VLBW. I will also confirm the rate of CAM and maternal vascular malperfusion (MVM).

Material: From an examination of the clinical records I chose 190 CLD cases, and examined the placentas in each one by microscope. My diagnosis of CAM or MVM was by the Amsterdam classification, 2014. SNC was diagnosed by necrosis of amnion with white blood cells invasion. CLD was defined by the newborn still needing oxygen after 36 weeks.

Results: From the 190 cases I found

53 cases of SNC

73 cases acute CAM

33 cases of MVM

Conclusions: There were a large number of severe CAM and SNC in CLD cases. This result confirms previous studies.

However, this study also shows that MVM is another significant factor in the development of CLD. MVM starts from maternal floor vascular disease (atherosclerosis, fibrinoid necrosis, decidual degeneration) and develops into fetal hypoxia and hypo nutrition and results in developmental problems, VLBW, organ damage, and complications with CLD.

68. CLINICAL AND PATHOLOGICAL PLACENTAL ABNORMALITY IN VELAMENTOUS CORD INSERTION

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Object: There are many reports about how velamentous cord Insertion (VCI) can lead to small for gestational age (SFG) and complications with twins and triplets, Hypertension disorder of pregnancy (HDP), and gestational diabetes (GDM). VCI means membranous insertion of umbilical cord which can lead to complications.

In this paper I examine clinical and pathological pictures in VCI cases.

My hypothesis, based on my results, shows how VCI may develop from the lack of circulation on the mother's side of the placenta. This maternal floor physiological problem can lead to the shape of the placenta changing and abnormal cord insertion.

Materials: I examined both gross and microscopic pictures in 109 VCI cases and also examined the clinical records in each case.

Results:

From the 109cases, there were:

By gross examination: