

# The risk factors face to neonatal development

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## Editorial

Neonatal period is the first four weeks of a child's life, it represents the period shifting from maternal uterus situation to outside environment by path away from maternal, the change is fast and some emergency events may occur. During the first month of newborn, structure and function of body in parts is critical changed in brain-nerve system maturation, cardiovascular and pulmonary development. This time for a child face to risks at developing of different diseases, which show in some description:

- a. Fetal Diseases, as Fetal Nutrition Disorders or Fetal Distress in Hypoxia;
- b. Hereditary Diseases, as Kartagener Syndrome or Cystic Fibrosis;
- c. Congenital Abnormal Diseases, as Digestive System Abnormalities or Cardiovascular Abnormalities;
- d. Newborn Diseases, as Persistent Fetal Circulation Syndrome, Vitamin K Deficiency Bleeding, Acute Respiratory Distress Syndrome or Birth Injuries.

The risk factors face to neonatal development is studied, and genetic reasons are in basic role to develop diseases of Hereditary Diseases and Congenital Defect or Newborn Diseases. Genetics reasons usually come from gene defect and gene mutation, the induced reasons may generate from intermarriage, hereditary, nutrition, infection or intoxication from alcohol or tobacco. The clinical presentations in genetic related diseases are most shown abnormal in central nerve system, cardiovascular system and digestive-intestinal system, with under the diseases as combined Immunology diseases, down's syndrome or Polygenic Diseases. The presented publication in 2013<sup>1</sup> described the risks to develop genetic diseases of Fabry, Pompe, or mucopolysaccharidosis-I from newborn blood detection; Dr. Wang and her group<sup>2</sup> also investigated that adenovirus infection could induce gene reconstructed and relocated its DNA fragment into body's DNA sequence, and hyperoxic injury could make remarkable presentation in record.

Environmental risk factors are also observed to neonatal development. Since the time of a child born, a new life fighting to environmental risks have begun; the risks to invade neonatal body either from maternal or from the child self by mediated with the factors of infection, nutrition or weather. The diseases during this time are observed, in the maternal side, some considering careless of nutrient, healthy or diseases will affect neonatal development, the common diseases in maternal are as blue depress, infection or nutrient deficiency, once these diseases become into serious degree, the neonatal is required to separated from the maternal. For the children, environmental situation shift great in the first month; there have much challenge to them as persistent fetal condition, infection or any discomfortable statue, these are at important role to affect on the neonatal development. The representative diseases in these time are cardiovascular abnormal, metabolism diseases or different

viral infection with EB, CMV or HIV. In epidemiology observation, Newborn Diseases with viral or bacterial infection could bring more serious situation by multiple innate gene response with social or economical broken in area;<sup>3</sup> there was a summarized review<sup>4</sup> that respiratory viral (RSV) was the 'hospitalizations and around 66,000 deaths worldwide each year, which apparently affected their family and social life.

The risk factors existed in fetus and neonatal period would affect neonatal development or their later life with grow-up. The basic risk factor is from gene interruption, any risks from hereditary, fetus generation, infection or environmental change may get to gene interruption. Currently we have effective technique to supervise fetal generation and newborn development such as gene scan or chromosome analysis, meanwhile, prevention and therapy are both at the important role to avoid of risk factors and bring healthy to children.

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## Conflicts of interest

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