HOPE for HIE

COMMON DIAGNOSES FROM HIE

CEREBRAL PALSY

Cerebral Palsy is the most common motor disability in children. Although HIE only accounts for 10-15% of all cases.

CP can affect any muscle in the body, potentially affecting movement, speech, and muscle tone. Depending on the study, CP affects roughly 40% of all children with HIE, across varying degrees.

Timeline of Diagnosis: Cerebral palsy is typically diagnosed within the first two years, with more mild CP diagnosed up until age 10.

EPILEPSY

Epilepsy is a grouping of various seizure disorders and affects upwards of 50-60% of all HIE cases, across all HIE "levels". HIE is a leading cause of neonatal seizures and several rare epilepsies.

There are several different types of seizures, and medical and surgical options to control them. Neonatal seizures are common with HIE, and may or may not turn into epilepsy.

Timeline of Diagnosis: Epilepsy can appear at anytime, but tends to either persist from neonatal seizures, or pop up during key developmental spurts around ages 4, 6, 8 and in puberty.

SECONDARY MICROCEPHALY

Many children with HIE get diagnosed with secondary microcephaly. This is not the same as congenital microcephaly and simply means "smaller head", due to the damage that restricts brain growth.

It has no bearing on cognition like primary, congenital microcephaly.

Timeline of Diagnosis: Secondary microcephaly is typically diagnosed within the first year, as brain growth is heavily tracked and measured post-injury.

LEARNING & ATTENTION ISSUES

Learning disabilities and differences, executive functioning, processing and attention issues such as ADHD, dyslexia, dysgraphia, dyscalculia, and others are common in children with HIE., with greater incidence than the general population.

Many children who do not have physical impacts end up with learning and attention issues. There are many strategies and accommodations to help students learn how their brains work best.

Timeline of Diagnosis: Learning and attention issues can show up early between the ages of 3-5, but most are diagnosed between the ages of 5-8.

AUTISM

Autism is more common in children with HIE. Research shows children across all levels of HIE are at risk for Autism Spectrum Disorder, with Mild HIE potentially being at the greatest risk.

Timeline of Diagnosis: Depending on the severity, autism with HIE can be diagnosed between 18 months and 5 years old, with some diagnoses coming later into the early teen years..

BEHAVIORAL CHALLENGES

Brain injuries are known to exacerbate enhanced behavioral responses. Sometimes this is related to frontal lobe damage, sometimes it is due to sensory processing difficulties.

Timeline of Diagnosis: It is hard to tease out what may be typical behavior early on. Many behavioral and sensory issues due to HIE are diagnosed between the ages of 2-5, and sometimes again between 7-10, due to frontal lobe development.

HEARING ISSUES

Sensorineural hearing loss, progressive hearing loss, auditory processing differences and disabilities, and other hearing-related issues are common with HIE.

Some children may benefit from hearing aids, cochlear implants, or auditory amplification devices in school.

Timeline of Diagnosis: Some babies will not pass their initial hearing test in the NICU and hospital. Others will be diagnosed within the first two years, usually through ordered hearing tests.

VISION ISSUES

HIE can cause certain vision challenges such as delayed visual maturation, cortical vision impairment, various types of strabismus are all very common.

Early identification of vision issues can help develop more functional vision, ideally with a multidisciplanary team of pediatric ophthalmology, optometry, and low vision specialists in schools.

Timeline of Diagnosis: Early vision assessments within the first few months and upwards of two years typically identify the majority of vision issues.