

Portable MRI (pMRI) for Pediatric Hypoxic Ischemic Brain Injury (HIBI): pMRI for HIBI

Targeting Early Diagnosis to Improve Outcomes

Hypoxic ischemic brain injury (HIBI) is caused by low oxygen or blood flow. HIBI can cause lifelong complications, so early detection and treatment is very important.

There are limitations to the current ways that the medical team can use radiology images to identify the problem.

These limitations can include:

- Some types of imaging expose patients to ionizing radiation and aren't able to reliably see HIBI right away
- Some medical devices are not safe to use near the regular MRI machine
- There are risks with moving sick children to the radiology area for imaging and there isn't one type of bedside imaging that is able to see all types of brain injuries at all times.



Your child may be able to help!

We are asking your child to be a part of this research study. Being part of research is your choice and will not affect your child's regular medical care. The goal of this research study is to find the best ways to detect HIBI in children. We are studying the use of the pMRI machine and comparing this to the head CT scan and/or brain MRI scan that was or may be ordered in the future by your child's medical team.

Eligibility Inclusion Criteria:

- PICU, CICU and NICU patients
- Ages 0-17 years at study enrollment
- Sudden changes of brain function

Exclusion Criteria:

- Pregnancy
- Any patient that has a contraindication to having an MRI

Contributions include:

Research Samples:

Leftover blood or spinal fluid that is no longer needed and will otherwise be discarded

Collection of Health Information:

Information such as your child's medical diagnosis, any potential risks for brain injury (if applicable), laboratory test results, medications, and treatments

Radiology Images:

Portable MRI will be performed within 24 hours of clinical imaging for comparison



Dr. Jessica S. Wallisch, MD
Principal Investigator
Pediatric Neurocritical Care Physician
jwallisch@cmh.edu
(816) 816-7929

Hannah Mendenhall, Coordinator
CriticalCareResearch@cmh.edu
816-816-9850



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KANSAS CITY
Research Institute

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