

Department of Developmental Disorders

Diagnostic and therapeutic researches for subjects with neurodevelopmental disorders (DD), such as intellectual disabilities (ID), specific learning disorder (LD), attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) are now ongoing.

Diagnosis and treatment for ID

- Nationwide survey of mental health of special medical staffs
- Support for ID mothers who care own child
- Cooperation between physician and DD coordinators
→ Health support book for ID subjects
- Prevention of functional decline in ID subjects

Systematized diagnosis and intervention

- Development of psychosocial approach & parenting method
ex. Social skill training : SST
- Assessment of slow acting MPH and non stimulant drug
- Establishment of differential diagnosis
→ Making guideline for specific developmental disorders

Pathophysiology & public information

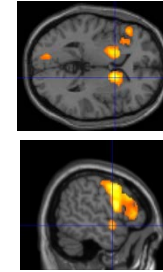
- Training course for medical doctors (Twice a year)
- Information activities on HP



Focus on the brain function in DD subjects

- **Brain function**
- Frequency analysis
 - Hemodynamic pattern

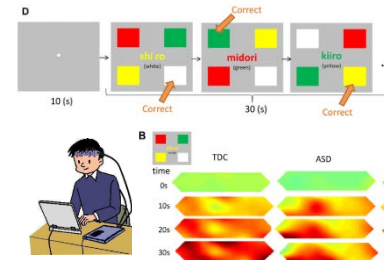
Diagnostic and therapeutic manual of specific learning disorder in Japan



- fMRI study
- Dyslexic children showed altered activity in two brain regions
1. Hyperactivity in the basal ganglia
 2. Hypoactivity in the left superior temporal cortex

Attentive and executive functions of ADHD children

- Near Infrared Spectroscopy (NIRS)



1. Diagnosis of the severity of ADHD through executive function task (reverse stroop task)
2. Assessment of effectiveness of (non)stimulant medicine for ADHD
3. Possibility of neurofeedback training for ADHD

Behavioral evaluation in mouse DD model

- Hyperactivity, anxiety, flash back and sleep cycle
→ Pathological and electrophysiological study



Our goals

- Improvement of diagnostic methodology of DD
- Intensive investigation of pathophysiology of DD
- Development of medical & social intervention for DD