A Diagnostic Tool for Autism

OCR Number: OCR 6482

Description:

Functional near infrared spectroscopy (fNIRS) as a diagnostic tool for Autism Spectrum Disorder (ASD) in high risk infants and toddlers

- Previous dual-brain studies during social interaction have demonstrated synchronization of brain activity of adult participants.
- Characterization of cross-brain synchronization between children and their mothers can be used to understand social communication in ASD using a novel, clinically usable, non-invasive brain imaging technology, functional near-infrared spectroscopy (fNIRS).
- It is hypothesized that cross-brain synchronization of regions associated with language, song, and vision occurs in typically developing infants or toddlers and their mothers during communication.
- In contrast, we predict that infants and toddlers at high risk for autism will show reduced or altered cross-brain synchronization with their mother’s brain activity during speech or songs.
- Although high-risk infants have similar brain patterns to children diagnosed with ASD, they do not show the characteristic ASD behavior. Therefore this may be a novel way to diagnose autism in high-risk infants much earlier than current methods.
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- IP status: PCT/US15/58835 pending

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