Adolescent Psychiatry

- Increase in consultation of Autism Spectrum Disorders.

[Autism Spectrum Disorders (ASD)]

① Persistent impairment in reciprocal social communication and interaction.
② Restricted, repetitive patterns of behavior, interests, or activities.

ASD is pointed out that biological factors are related to brain features. Individuals with ASD are called Atypical Development. (Baron-Cohen, 2008; Frith, 2003)

[Empathizing-Systemizing Theory]

Empathizing-Systemizing Theory (E-S Theory) divides the type of individual’s brain by 2 dimensions: Empathizing and systemizing. (Baron-Cohen, 2002)

Empathizing is the drive to identify another person’s emotions and thoughts, and to respond to these with an appropriate emotion.

Systemizing is the drive to analyze and build systems, with the aim of understanding and predicting non-agentive events.

In the E-S Theory, Brain Types were divided into 5: Extreme Empathizing Brain Type (Extreme Type E), Empathizing Brain Type (Type E), Balanced Brain Type (Type B), Systemizing Brain Type (Type S), Extreme Systemizing Brain Type (Extreme Type S). (Fig.1)

In ES theory, sex difference is known. Type E was more frequent among females, whereas Type S was more frequent in males. (Wakabayashi et al., 2012)

Individuals with ASD are strongly systematized. Many adults with ASD were pointed out as Type S or Extreme Type S. (Wakabayashi et al., 2007)

【Purpose】

The purpose of this study was to clarify the characteristics of brain type of Adolescents with ASD.

【Method】

Subject: Tab. 1

11 subjects who were inpatients at the Adolescent Psychiatry in Japan. They were adolescents with ASD and from 7th-grade to 12th-grade.

Measures: The Empathy Quotient and The Systemizing Quotient

The EQ/SQ: Japanese version [Self-administered questionnaires]

Based on the E-S theory, the empathy quotient (EQ) and the systemizing quotient (SQ) have been developed as instruments to measure empathy and systematization. (Baron-Cohen et al., 2003; Baron-Cohen et al., 2004)

The EQ/SQ has 100 items. Each of the EQ and SQ comprises 40 questions, and 20 filler items.


Ethical considerations: This study was approved by University of Tsukuba Faculty of Medicine Ethics Committee (No.1111-1) and research facility. Informed consent was obtained from participants and their guardian caregivers before the initiation of any research procedures.

【Results】

- The brain types of Adolescents with ASD were 2 Type E, 2 Type B, and 7 Type S. (Tab. 2)

Note. N=11

【Discussion】

Previous studies ⇒ Many individuals with ASD are the extreme Type S. This study ⇒ There were no extreme Type S.

Girls were more of Type E and Type B.

Even if they are diagnosed with ASD, the type of brain may differ from adults with ASD.

① Adolescents with ASD had brain characteristics different from those of adults with ASD.
② Adolescent girls who are not good at interpersonal relationship may seem like individuals with ASD.

Using the EQ/SQ to evaluate brain type seemed useful for considering nursing intervention.

For adolescents with ASD, different interventions are required from adults with ASD.

【Reference】

Baron-Cohen et al. (2003). The systemizing quotient: an investigation of adults with Asperger syndrome or high-functioning autism, and normal sex differences. Philosophical Transactions of the Royal Society of London B: Biological Sciences, 358(1430), 361-374.

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