

CASE REPORT

Attachment Disorder and Early Media Exposure : Neurobehavioral symptoms mimicking autism spectrum disorder

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Abstract : Many studies have reported many adverse effects of children's use of media. These effects include reduced cognitive development and hyperactivity and attention disorders. Although it has been recommended that child be kept away from the media during the early developmental period, many modern parents use the media as a way to calm their children. Consequently, these children lack the opportunity to form selective attachments by reduced social engagement. These children's symptoms occasionally mimic autism spectrum disorder (ASD). However, few studies have examined the symptoms children develop with early media exposure. Here, we present a boy exposed to the media during his early development who was diagnosed with attachment disorder. He was unable to make eye contact and was hyperactive and had delayed language development, like children with ASD. His symptoms improved dramatically after he was prevented from using all media and encouraged to play in other ways. After this treatment, he would make eye contact, and talked about playing with their parents. Simply avoiding the media and playing with others can change the behavior of a child with ASD-like symptoms. It is important to understand the symptoms caused by attachment disorder and early media exposure. *J. Med. Invest.* 65 : 280-282, August, 2018

Keywords : attachment disorder, media, television, autism spectrum disorder

1. INTRODUCTION

In children, exposure to media such as television, videos, computers, and touch-screen devices is associated with delayed cognitive development (1), aggressive behavior (2), hyperactivity (3), attention problem (4), and sleep disturbance (5). The American Academy of Pediatrics (AAP) recommends that the use of digital media be avoided in children younger than 24 months, and screen viewing should be limited to 1 h per day of high-quality programming in children 2 to 5 years of age (6). In addition to avoiding television, the AAP recommends pediatricians educating parents about brain development in the early years and the importance of hands-on, unstructured, social play to build language, cognitive, and social-emotional skills. However, many modern parents may not know how to play with children unless they use several forms of media and may also use media as a way to calm their children. Exposure to media instead of playing with children may also affect parent-child attachment. Children who have not had an opportunity to form selective attachment show a pattern of abnormal behaviors called attachment disorder (7). However, there are few reports of specific symptoms in children as a result of early media exposure and attachment disorder. We report a patient with attachment disorder that resulted from the absence of adequate caregiving and early media exposure. His symptoms mimicked autism spectrum disorder (ASD). It is important to understand the symptoms caused by attachment disorder and early media exposure and

identify the best therapeutic approach to use in these children.

2. CASE REPORT

A boy of non-consanguineous Japanese parents was born at term after a normal pregnancy. He is an only child. His father is an office worker and his mother is a housewife. No one in his family has ASD, epilepsies, or any other neurological disorder. His language and social development proceeded normally until 18 months of age. When he was 5 years old, his parents noted that he sometimes did not react. An electroencephalography (EEG) recorded at 5 years of age showed diffuse irregular polyspikes and spikes and waves predominantly in frontal area during sleep (Figure 1A). Brain magnetic resonance imaging (MRI) results were normal at 5 years of age (Figure 1B). He was diagnosed with frontal lobe epilepsy based on EEG abnormalities. His seizure symptoms disappeared 3 months after starting treatment with valproic acid. In addition to epilepsy, he also had many neurobehavioral problems. He was constantly running around, imitating the action hero Kamen Rider, romping, and shouting. His physical condition was essentially normal. He would not make eye contact. He talked fluently about media items only. He would not answer any questions. His parents said that he had spent most of his time watching videos of action heroes since he was 6 months old. He did not play in any other way. We administered the Childhood Autism Rating Scale (CARS) (8), which is a 15-item behavior rating scale and helps to identify children with ASD. Each item covers a particular characteristic and behavior of children with autism. Scores of less than 29, between 30 and 36, and above 36 on the CARS are considered indicative of normal, mild to moderate autism, and severe autism, respectively. His CARS score was 37 at his first visit. The

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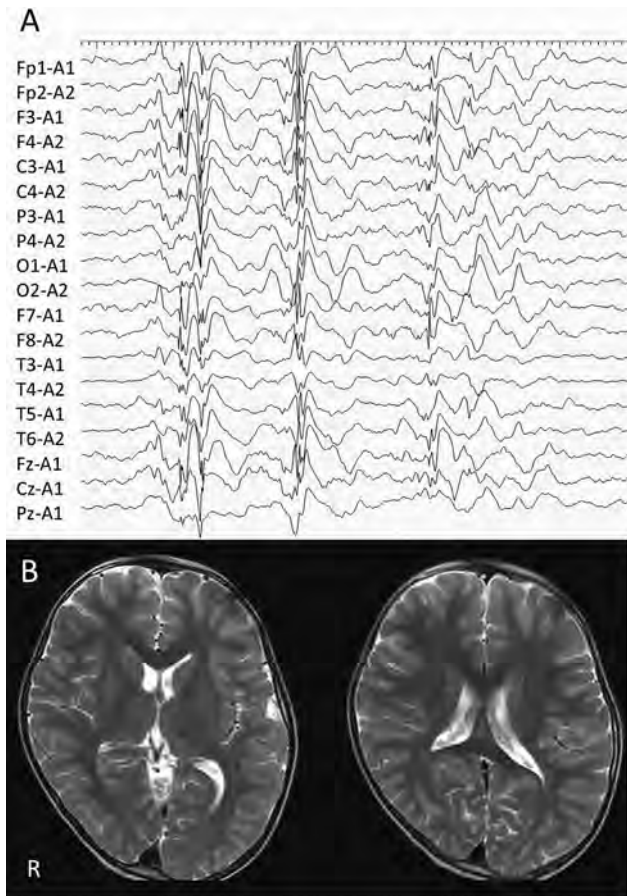


Figure 1. EEG and MRI findings
EEG findings (A) and MRI findings (B) at 5 ages

score of CARS as 37 indicates that he is a child with feature of severe autism. When we asked him to draw his mother's face, he drew something that did not resemble a face (Figure 2A). Although he seemed to be exhibiting ASD-like symptoms, he liked to play with his evaluator rather than alone and he would seek the company of someone to play with him; he did not resist physical contact or exhibit aberrant reactivity to sensory stimuli. We believed that his condition was different from a disabling condition such as ASD with its associated social and qualitative communicative impairments. We believed that his condition developed in the absence of adequate caregiving. Based on these findings, we diagnosed him with attachment disorder, which proposed by Zeanah CH (7). We also believed that his symptoms had been strongly affected by the media. We informed his parents not to let him watch any more television and to physically play (e.g., tickle each other or catch and run). He practically liked play with clay, tickling each other, and chase after his father in the park. After 2 weeks with no exposure to media, he began making eye contact, talking about playing with his parents. He could listen to others and sit quietly. His CARS score was 26.5 two months after he had stopped watching media and started physical play. After 2 months, he could draw his mother's face (Figure 2B).

3. DISCUSSION

Children with early media exposure can often have ASD-like

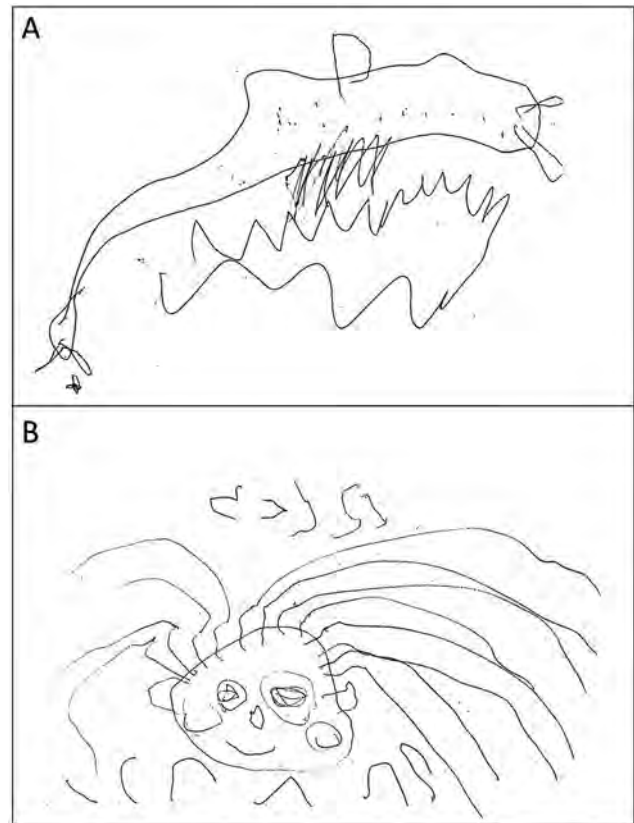


Figure 2. The picture of the mother's face that the patients drew
When we asked him to draw his mother's face, the picture that he drew at his first visit (A), and after two months with no exposure to media (B)

symptoms and be treated dramatically by preventing from using all media and encouraged to play in other ways. Many studies have summarized the risks of media exposure in children (1-4). Early media exposure can also affect parent-child interactions and attachment. Conversely, if a child is allowed physical play with his/her parents and forms parent-child attachment, the child does not need to watch television. Children with no opportunity to develop an attachment relationship, as if like our patient, are at increased risk of a variety of social and behavioral problems, including an autistic-like pattern (9). Our patient's CARS score, which is a useful guide to the severity of ASD, improved after he was forbidden to watch videos. Because DSM criteria were based on literature pertaining to extreme groups of children (e.g., those who have social neglect and institutionalized), we considered his condition attachment disorder, which proposed by Zeanah CH (7). With no exposure to the media and the formation of parent-child attachment, his impaired social communication and interactions and limited, repetitive behavior improved. Some studies have reported a relationship between children's drawings of their family and their attachment (10). After avoiding the media, his drawings showed much richer morphological expression. His language development was delayed, as in toddlers with ASD, with a marked delay in both receptive and expressive language. Regarding developmental problems caused by early media exposure, a correct diagnosis and appropriate response can change the patient's symptoms drastically in a relatively short time. It is important to understand the symptoms caused by attachment disorder and early media exposure, and it is necessary to identify how to treat these children and guide their parents.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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