Autistic Disorder Associated with Congenital HIV Infection

Laura Musetti, Alessandro Albizzati, Antonio Grioni, Massimo Rossetti, Monica Saccani and Cristina Musetti*

Although autistic disorder is rare, we identified three children with this syndrome in a sample of 286 children with congenital HIV infection. The prevalence of autistic disorder was thus greater than expected from epidemiological data. The present article describes the clinical manifestations and course of development of the three children. Etiologic heterogeneity in autism is assumed by most investigators because of the occurrence of autistic disorder in persons with a variety of other disorders (e.g. viral or genetic). We hypothesize that there is a complex relation between congenital HIV infection and autistic disorder and suggest the need for systematic investigations of larger series of HIV positive children.

Introduction

The ever increasing number of human immunodeficiency virus (HIV) infected children has drawn attention to the psychological risk associated with the unfavorable biological and psychosocial factors that are in operation from the earliest years in such cases.

A handful of authors have emphasized the impact of acquired immuno defciency syndrome (AIDS) on the neuropsychological and psychosocial functioning of infected children (Frierson et al., 1987; Belfer et al., 1988; Musetti et al., 1990). While some work has been published on the emotional reactions of HIV infected children (Strunning et al., 1987; Hard Winner, 1988; Singerman Tucker et al., 1990) little attention has been paid to the potential influence of HIV infection in children on psychological development and psychiatric disorders.

Recent neuropsychological literature highlights significant developmental delays in the majority of HIV-infected children. These delays may be associated with adverse conditions during the antenatal period (maternal drug abuse, lack of antenatal care) which may increase later cognitive dysfunction. Developmental delays are usually more common in the cognitive area of psychomotor skills than in language or verbally mediated skills (Ultman et al., 1987; Price et al., 1988).

Case Reports

It is estimated that there were 1900 HIV infected children under the age of 15 in Italy in 1991 (The Ministry of Health, 1991). In May of that year, there were 222 living children with AIDS, that is 11.6% of all cases of HIV infection in subjects un-
der age 15 years. Of these, 89% (198 out of 222) were children of parents who were current or former drug addicts (the mother in all cases, the father in some).

In a study designed to create a mental health model for children with congenital HIV infection or AIDS and their relatives in Milan, we have carried out a neuropsychiatric follow-up of 286 children aged 0 to 9 years with HIV infection, 48 of which had AIDS. Autism was diagnosed in 3 of the 286 children (1%), all HIV-positive but asymptomatic.

Case 1

This boy, aged 31 months, is the only child of a mother with passive-aggressive personality disorder according to the DSM-III-R (APA, 1987) criteria who was an intravenous drug abuser for 2 years but stopped 2 years before the child's birth. She tested positive for HIV antigen for the first time at the beginning of pregnancy. The child was born at 41 weeks by normal delivery, with weight of 4,420 g, length 54 cm and head circumference 37 cm. The Apgar score was 9-10. Ultrasound tomography of the brain at birth revealed no pathological signs, although the septum pellucidum cavity was enlarged (3 mm). The child was bottle-fed as the mother had no milk.

During the first month he was hyperactive and did not want to be cuddled by his mother. At 6 months he had eating problems and refused solid food. At 8 months he showed a neuromotor delay of about 1.5 months, with marked hypotonia of the trunk and right limbs and an unusually persistent use of labyrinthic extensor reflexes. At 15 months, he still had minor signs of neuromotor dysfunction and could not walk by himself. He seemed frightened and kept crying even when his mother was present, and he had sleep disorders. The mother described her son as an "irresponsive baby". He showed little interest in people, was restless and kept repeating the same activities, like playing on his own with water and soil. At 16 months he still had sleep problems and presented autoaggressive behaviour such as beating his head, and rubbing his gums and scratching them until they bled. His speech production was limited to shouting. He showed scant emotional attachment to his mother, tending to ignore her and wanting to be on his own. At 28 months, his developmental quotient (DQ) on the Griffiths test was 45, though he did better on the motor tests. His interaction with his mother was marked by emotional withdrawal as shown by his turning away from and rejection of persons and objects.

The most important symptoms at the last assessment (31 months) were self abuse in the form of face scratching, the lack of interaction with the mother and family, stereotyped play with soil and his own saliva, unreasonable insistence on precisely performed routines such as opening and closing doors and turning taps on and off. Verbal communication was lacking, speech was limited to prolonged screaming, and imitative behaviour was absent. His childhood autism rating scale (CARS, Schopler et al., 1985) score was 39, corresponding to severe autism (15-29.5 no autism, 30-36.5 moderate autism, 37-60.0 severe autism).

Based on the child's severely impaired verbal and non verbal communication, autoaggressiveness, markedly reduced social contact and stereotyped sensorimotor activities, we diagnosed autistic disorder according to the DSM-III-R criteria (APA, 1987).

Case 2

This boy, aged 29 months, is the first child of an ex-drug addicted, HIV infected father with major depression and an HIV-positive mother with severe narcissistic personality disorder according to the DSM-III-R criteria, who died when the boy was 15.4 months old. By a previous husband the mother had had another daughter, 5 years older than the boy, also with AIDS, who showed no signs of autism. The boy was born at 40 weeks by normal delivery, with weight of 3,460 g, length 54 cm and head circumference 35 cm. The Apgar score was 8-9. Ultrasound tomography of the brain at birth revealed no pathological signs, although the septum pellucidum cavity was enlarged (3 mm). The child was bottle-fed as the mother had no milk.

During the first month he was hyperactive and did not want to be cuddled by his mother. At 6 months he had eating problems and refused solid food. At 8 months he showed a neuromotor delay of about 1.5 months, with marked hypotonia of the trunk and right limbs and an unusually persistent use of labyrinthic extensor reflexes. At 15 months, he still had minor signs of neuromotor dysfunction and could not walk by himself. He seemed frightened and kept crying even when his mother was present, and he had sleep disorders. The mother described her son as an "irresponsive baby". He showed little interest in people, was restless and kept repeating the same activities, like playing on his own with water and soil. At 16 months he still had sleep problems and presented autoaggressive behaviour such as beating his head, and rubbing his gums and scratching them until they bled. His speech production was limited to shouting. He showed scant emotional attachment to his mother, tending to ignore her and wanting to be on his own. At 28 months, his developmental quotient (DQ) on the Griffiths test was 45, though he did better on the motor tests. His interaction with his mother was marked by emotional withdrawal as shown by his turning away from and rejection of persons and objects.

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