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Evaluation of Criminal Responsibility in a Patient with Fetal Alcohol Syndrome and Intellectual Disability

Short title: Fetal Alcohol Syndrome and Intellectual Disability

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Abstract

The current study presents the case of a young man with intellectual disability related to fetal alcohol syndrome, referred for forensic psychiatric examination of criminal liability following charges of armed robbery, and who was considered not criminally liable. In such cases, it is crucial to perform early diagnosis and rely on educational and developmental services and a supportive home environment to decrease complications such as substance use and criminal involvement.
Keywords: intellectual disability; crime; robbery; fetal alcohol syndrome; criminal responsibility.

Introduction

Fetal alcohol syndrome (FAS) was first reported by Jones et al.[1], who described eight cases of children born to chronic alcoholic mothers. The children presented a similar pattern of craniofacial, limb, and cardiovascular anomalies associated with growth restriction beginning in the prenatal period and subsequent developmental delay. Seven of the eight children also presented microcephaly and maxillary hypoplasia with prognathism.

The estimated incidence of FAS is one in 1,000 live births[2]. According to the Centers for Disease Control (CDC)[3], some 40,000 infants are born with FAS every year in the United States. The syndrome is thus classified as equally important as autism spectrum disorder in children. FAS is one of the leading preventable causes of congenital intellectual disability (ID).

No dose of alcohol is considered completely free from generating the syndrome, but the degree of disability and the phenotypical alterations are directly related to the amount of alcohol consumed and the duration of exposure[4]. More days of maternal alcohol consumption per week and sustained consumption throughout all trimesters of pregnancy increase the risk of FAS. The first trimester is the most vulnerable period, with 12 times higher risk compared to the second and third trimesters[5].

Ryan and Ferguson[6] list four diagnostic criteria for FAS: (1) prenatal and/or postnatal growth restriction; (2) permanent brain damage resulting in neurological abnormalities, developmental delay, intellectual disability, and learning/behavioral disability; (3) abnormal facial characteristics, including small

palpebral fissures, thin upper lip, and smooth philtrum; and (4) history of maternal alcohol use during the pregnancy.

More in-depth studies in the last two decades have suggested that there are various degrees of severity in the fetal effects of alcohol, leading to the current term “fetal alcohol spectrum disorders” (FASD)[7], considered a group of behavioral and learning symptoms that an individual may present as the direct result of the mother’s alcohol consumption during pregnancy. The repercussions included in FASD vary in severity and are manifested in various ways across the spectrum.

FASD is not listed as a specific clinical disorder in DSM-5[8]. Rather, it encompasses various clinical conditions that involve cognition, behavior, and functioning. DSM-5[8] acknowledges the need to gather more data on the topic and lists Neurobehavioral Disorder Associated with Prenatal Alcohol Exposure (ND-PAE) in the chapter on conditions needing further study.

Physical characteristics frequently associated with FAS become less perceptible as the child reaches puberty. Meanwhile, the behavioral, emotional, and social problems become more perceptible in this phase. Hyperactivity, impulsivity, difficulties with attention and abstract reasoning, poor judgement, lack of appreciation of the consequences of their acts and understanding of social rules, lack of problem-solving skills, and lack of financial skills have been identified as common problems in children with FAS, even in those with IQ above the intellectual disability range[9,10]. These youngsters display high rates of conduct disorder, trouble with the law, and confinement in institutions for young offenders[11].

Structural alterations of the central nervous system resulting from FAS include reduced brain volume with major involvement of the frontal lobes, basal ganglia, and cerebellum, hypoplasia of the corpus callosum, and abnormal functioning of the cerebral amygdalae[12].

Our objective is to provide a case report of a patient with intellectual disability and fetal alcohol syndrome who committed an armed robbery and subsequently underwent forensic psychiatric examination for criminal responsibility.

Case report

L, 21 years old, Brazilian, single, semiliterate, vendor (sells candy in the commuter train). Accused of robbing a woman at knifepoint. In his version of the crime, he states: “I grabbed a lady’s cellphone and ran off, because I wanted to buy drugs.” He appears for the examination with a maternal uncle, who also provides information.

L and his uncle cannot provide any information on the conditions of his birth or his psychomotor development. They report common childhood viral infections, including chickenpox. They report a history of seizures and use of phenytoin. L reports use of cannabis and crack, more frequently on weekends.

L’s mother is an alcoholic, consuming a liter of distilled sugar cane liquor per day, even before L was born, according to his uncle. L reports not maintaining any relations with his family, only visiting them rarely. He was admitted to a juvenile detention facility at 10 years of age after robbing a woman. He attended the second grade of primary school. He dropped out of school when he ran away from home to live in the streets. He says he has great difficulty learning. He has never had girlfriends and has no children. He states that he has lived in the streets since he was 11 years old.

Upon physical examination, the patient’s head appears proportionally small for his body, with short palpebral fissures, dimorphic face, smooth philtrum, low nasal bridge, thin upper lip, short stature (1.48 m), and prominent frontal region.

L appears for the examination displaying precarious hygiene. He has difficulty in understanding what is asked, sometimes looking bewildered. The patient’s mental impoverishment is evident. His speech presents a poverty of expressions. He is unable to perform simple calculations, interpret popular sayings, or distinguish between simple concepts (e.g., the difference between a child and a dwarf). He lacks basic knowledge of his surroundings (does not know the capital of Brazil, the president’s name, etc.). He is unable to define simple concepts such as sincerity and happiness. He is oriented in space and partially in time, with memories largely devoid of details. He displays concrete thinking and great difficulty with mental abstraction and symbolization. No delusional or

hallucinatory activity is currently present. Below-normal intelligence. Volitional connections entirely jeopardized.

The final psychiatric diagnosis was based on the psychiatric interview, using the diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-4)[13]. SCID I[14] and SCID II[15] were applied, leading to the diagnosis of intellectual disability related to fetal alcohol syndrome.

Discussion

The diagnosis of intellectual disability (ID) appears clearly in the patient's mental impoverishment, as he displays difficulty in reasoning and his thinking is concrete, with poor content. He was unable to continue his studies or develop a skilled occupation. The following aspects of FAS are present in this case: growth restriction and intellectual disability, neurological abnormalities (epileptic seizures), and abnormal facial characteristics.

The above-mentioned physical circumstances in the patient's physical examination, associated with his intellectual disability and the history of his mother's alcohol abuse, point to the diagnosis of fetal alcohol syndrome, with intellectual disability as a basic characteristic.

The forensic psychiatric conclusion was that due to his intellectual disability, at the time of the crime, L was entirely incapable of understanding the illegal nature of the facts or of determining his own acts in the situation, and he was thus deemed not criminally liable.

Fetal alcohol spectrum disorder (FASD) is the principal known cause of intellectual disability, and forensic psychiatric examiners are frequently asked to determine whether a defendant with FASD presents a diagnosis of ID[16].

The current case illustrates how the psychosocial and psychiatric effects of prenatal alcohol exposure profoundly influence the life of children exposed prenatally to this substance, resulting in disturbed social and behavioral functioning. Such problems tend to persist into adulthood, causing further harm to the individual.

Children with FASD can have difficulties in all scholastic areas, but those that appear to be most difficult include math and writing, due to the difficulties in understanding abstract language. Children with FASD can also display slow

information processing, as in the current case. We can certainly not fail to consider the precarious social and living conditions in this patient's case[17].

According to the U.S. Office of Juvenile Justice and Delinquency Prevention[18], 61% of adolescents with FASD have trouble with the law and 35% of those over 12 have been incarcerated at some time in their lives. The types of crimes usually committed by these youth tend to be impulsive and unplanned, such as thefts and robberies. The case of L illustrates this issue quite well.

Conclusion

According to a study by the CDC[3], 7.6% of pregnant woman report alcohol use in the previous 30 days. Education is essential for preventing FASD. Public awareness-raising and educational campaigns on the risks of alcohol consumption during pregnancy, education of physicians and health workers who can influence childbearing-age women to avoid alcohol use, especially during pregnancy, and treatment programs for alcohol-related problems in pregnant women are extremely important[19].

For patients with FASD, early diagnosis, presence of educational services, and the development of a supportive home environment have been associated with lower occurrence of secondary disorders such as substance use and criminal involvement[20].

Cognitive control therapy, language and literacy therapy, mathematics intervention and rehearsal training for memory may be beneficial strategies for these patients. Social skills training may improve social skills and behaviour at home and Attention Process Training may improve attention.Pharmacological interventions, have shown some benefit from stimulant medications[21].

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curation-Equal, Formal analysis-Equal, Methodology-Equal, Resources-Equal, Supervision-Equal, Visualization-Equal

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