

Case Report

Moderate mental retardation with behavior disorder in cerebral palsy: a case report

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ABSTRACT

Mental retardation (MR) is a condition where the cessation of mental development occurs or is incomplete, mainly marked by the disruption of skill during development, affecting intelligence (cognitive, language, motor, and social abilities). Cerebral palsy (CP) is a group of motoric and physical posture development disorders caused by cerebral development impairment. Children with MR frequently have a co-occurring CP. In this case report, a 6 years old girl consulted to the psychiatric department because of emotional irritability. The patient was seen limping on one side, screaming, moving everywhere, uncooperative, imperfect sentence, not able to draw well and would scream in anger if not get what she wants. Since birth, she has weakness on her left side of the body, has a gross motor delay, still unable to take off her clothes. The patient was born through vaginal delivery at 8 months gestational age with premature rupture of membrane, cried spontaneously. During the pregnancy, the mother had routine antenatal care from the midwife and was said to be fine. The patient was diagnosed with moderate mental retardation with a significant behavioral disorder that requires attention or therapy. Pharmacological therapy of risperidone 0.3 milligram, vitamin B6 10 milligram, and folic acid 1 milligram all are taken once daily oral. MR can have a co-occurring CP and need to be treated. The treatment should consist of mental and physical therapy, as well as rehabilitation.

Keywords: Cerebral palsy, Case report, Mental retardation, Intellectual disability

INTRODUCTION

Mental retardation (MR) is a heterogenous disorder consisting of below-average intellectual function and impairment of adaptive skill which is discovered before 18 years old. This disorder is influenced by genetic factors, including small chromosomal abnormalities, genetic syndrome and subclinical lead intoxication, and prenatal toxin exposures with mild MR (up to 85% of the MR population).¹

The prevalence of MR is estimated to approximately 1% of the population. The incidence of MR is hard to measure due to the difficulty of recognizing its onset. In most cases,

the retardation may be latent for a long time before the disabilities were recognized or because of a good adaptation.² The prevalence of mild MR is 0.37-0.59%, while for moderate, severe, and very severe MR is 0.3% to 0.4%.³ The incidence is highest in the school-aged children, peaking at 10 to 14 years old. MR is 1.5 times more common in males than females. In the elderly, the prevalence is less because those with severe or very severe MR have a higher mortality rate due to the associated physical ailments.¹

MR is a global problem with major implications, especially to the developing countries. It is estimated that severe MR is approximately 0,3% of all population and

almost 3% have an intelligent quotient (IQ) below 70. As human resources, of course, people with MR cannot be utilized because 0.1% of these children require care, guidance, and supervision throughout their lives.⁴

Cerebral palsy is a problem or disorder that occurs at a certain period during the child's development in the central nervous system. It is a chronic condition, not progressive and is caused by abnormalities or defects in the brain tissue that have not yet finished growing. Although the cerebral lesion is static and not progressive, the development of peripheral neuron signs will change as a result of cerebral maturation.¹

This disorder was introduced the first time by William John Little, who called it cerebral diplegia, because of prematurity or neonatal asphyxia. Sir William Osler was the first to introduce the term cerebral palsy, while Sigmund Freud called it infantile cerebral paralysis.^{3,4} Even though it is difficult, the etiology of cerebral palsy should be known for preventive measure. Early physiotherapy gives a good result however, the presence of mental development disorder may hinder the achievement of therapeutic goals.⁵

Winthrop Phelps emphasized the importance of a multidisciplinary approach in the management of cerebral palsy patients, including the pediatry, neurology, ophthalmologist, ear-nose-throat (ENT), orthopedic surgeon, neurosurgeon, psychologist, speech experts, physiotherapists, social workers, the teachers from the school for special needs, and the role of the parent and society.³

CASE REPORT

A 6 years 8 months 8 days old female child was consulted to the psychiatry department for emotional irritability. The patient was interviewed while walking and running with one limp leg. Then, the patient screamed at the polyclinic. The patient wore a brown shirt with a grey jacket and long blue jeans. The patient wore a cloth mask and socks with sandals. During the interview, the patient seemed restless and shuffled around here and there and screamed. When called, the patient turned to the examiner and when she was tapped, the patient also turned to the examiner. The patient did not answer all the examiner's questions starting from the name, age, and with whom she went to the hospital.

The patient appeared uncooperative, restless and screamed during the interview. The patient was able to speak well and form sentences. When asked about animals and numbers, the patient could not answer. When asked about the colors, the patient answered with many wrong colors. The patient was not able to follow the instructions given by the examiner.

The patient was only able to scribble when she was given colored pencils to draw, unable to form an image such as a circle or other shapes. She was only focused for a few

moments and then leave the pencils to do something else. During the interview, the patients want to hold the examiner's hands to take her for a walk. If the patient's desire was not followed, she would scream hysterically.

Heteroanamensis data for the parent stated that the patient could not control her emotions if her desire was not fulfilled by her parent until it made her father angry every time he came home from work. The patient was said to be unable to read or write, recognize numbers, or animals. The patient was able to name colors but it did not match with what was ordered. The patient was said to be impatient with what she was doing, easily changing activities. She had a problem with walking and had a left-sided weakness since birth.

The patient was taken for physiotherapy since she was 2,5 years old for a year but stopped because they had difficulty paying the physiotherapy cost. Recently the patient was able to go to control because of the health insurance (BPJS).

The patient was born through vaginal delivery, premature (8 months) at Sanglah General Hospital because of premature rupture of the membrane, cried spontaneously with a birth weight of 2.500 gram and a body length of 48 centimeters. During the pregnancy, the mother had routine antenatal care without any problem. However, in the third trimester, the mother felt a clear fluid coming out from her genital, then she went to the midwife. The midwife referred the patient to the nearest hospital however, several hospitals were said to be full and could not accept her, thus she was referred to Sanglah General Hospital. Throughout her pregnancy, the mother did not have any history of illness. The mother routinely went to the midwife for antenatal care and had complete immunization. The patient's mother took the vitamins given by the midwife, 3 times a week and consumed sea-fish. Both parent expected this pregnancy. The patient is the second child of 2, 10 years apart from the first child.

After birth, the patient was said to exclusively breastfeed for 2 years. The patient's parent were suspicious of her left leg and hand due to it looked different and were shaking since birth. The shaking did not disappear even though her parent had given warmth by using a blanket, socks, or being held/ warmed by the parent's hand. The patient was brought to the posyandu to do immunization and check her weight and nutrition regularly. The patient was said to have good weight and nutrition. She has never had seizures, high fever, or other illnesses that need hospitalization.

The parent said that the patient had a delay in her development milestones compared with their first child. It is said that the patient's condition was like a 2-3 years old child. The patient only able to walk at 2 years 6 months old, say "mommy" and "daddy" at 1 year old, and crawl at 1 year 6 months old, sit upright at 2 years old, and creep at 2 years old. Until now, the patient has not been able to

wear her clothes and take off her clothes. The patient was able to eat using her right hand but still cannot move the food to her plate. The patient is currently attending the pre-school (Early Childhood Education and Development/PAUD in Indonesia), but she cannot continue her education at elementary school because she cannot read, write, and recognize numbers.

None of the family members had a history of severe illness or disorders like the patient currently had. According to her mother, the patient often plays together with her friends at home and school, but she was often angry and become emotional if what she wants was not fulfilled. Thus, the patient did not have many friends.

Based on the general physical examination, there was an abnormality on the patient's limb where her left lower limb looked bent, tiptoed when walking, and rigidity on the sole of her left foot when palpated. The psychiatric status was an improper general appearance, looking restless and unable to calm down, wandering around, holding every object she sees, shouting, and answering questions in an unclear voice. The patient had adequate verbal, inadequate visual contact, congruent dysphoric mood and affect. The patient had a developmental delay that was similar to children aged 3 years 6 months old. There was indication of Attention deficit disorder (ADD) and mental retardation in this patient. The thought process: cannot be evaluated. The perceptions: no visual hallucination nor illusion. Psychomotor: increased. The defense mechanism in this patient was acting out. The PANSS-EC examination obtained a score of 3 which means that the patient was restless but could still be given oral pharmacotherapy.

The diagnosis of this patient according to the Guidelines of Classification and Diagnosis of Mental Disorders in Indonesia III (Pedoman Penggolongan dan Diagnosis Gangguan Jiwa di Indonesia III/PPDGJ-III) in Axis I was moderate mental retardation with impaired behavior and requires attention or therapy (F71.1), in Axis II was angry, cheerful, love to socialize, in Axis III was cerebral palsy, in Axis IV was no clear stressor, and in Axis V was GAF score during examination 40-31. The patient was given pharmacology therapy with 0.3 mg Risperidone tablet, 10 mg Vitamin B6 tablet, and 1 mg Folic acid tablet every 24 hours orally (morning), while the non-pharmacological therapy given was psychoeducation to the parent.

DISCUSSION

Turks. The patient was 6 years old, Hindu, Balinese female student who currently attending pre-school. She was referred to the psychiatry department due to behavior impairment with irritability. She was impatient to do the things she wants. There was a weakness in her left side of the body since birth. She acted like a 3 years old child and had a developmental delay.

This case was diagnosed as moderate mental retardation with impaired behavior and requires attention or therapy

(F71.1) according to the PPDGJ III and DSM V.^{6,7} The patient was restless and difficult to communicate with. There was also a cognitive deficit in this patient with the intelligence equivalent of a 3.5 years old child. This cognitive deficit will result in an impaired capacity for daily independence.

Several factors associated with this case were: motoric disorders, namely weakness on the left limb, cognitive deficit.

The risperidone use was indeed beneficial in reducing the level of aggressiveness of children's behavior. Risperidone was usually given for a very long time. This journal aims to find out whether giving long-term risperidone therapy to children with behavior disorders will give a bad effect on the children's behavior or not. It turns out that stopping long-term risperidone did not cause a child to re-experience the same behavior disorders. There were also significant beneficial effects on body weight, waist circumference, BMI, prolactin, and testosterone level in the group that stop the long-term risperidone therapy.⁸

CONCLUSION

Based on the psychodynamic analysis, there were several biological factors found in this patient, namely premature birth, premature rupture of membrane with late medical management, cerebral palsy, and developmental delays. Those biological factors made it difficult for her to train which results in impaired behavior. The psychological factor, in this case, was the patient's parent love the patient very much, while the socio-economic factor was this patient was from a poor family so the patient's treatment was stopped once for 1 year due to economic reasons.

We can conclude that MR can have a co-occurring CP and need to be treated accordingly. The treatment should consist of mental and physical therapy, as well as rehabilitation. Patient's environment must be supportive, so patient not feeling inferior in life with disability.

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