BEHAVIORAL PROBLEMS IN PATIENTS OF BORDERLINE INTELLIGENCE WITH MULTIPLE PHYSICAL CO-MORBIDITIES: A PSYCHO-DIAGNOSTIC APPROACH.

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Abstract

Behavioral problems are commonly encountered in individuals with compromised cognitive function. It is more reported with moderate to severe mental retardation. Behavioral problems in patients with subnormal intelligence are due to their poor stress handling ability and poor ability to deliver their conduct. Factors like poor psycho-social support, high expressed emotion, associated physical disabling illness may attribute to worsening or persistence of behavioral symptoms. In this case report, a case of borderline intelligence with co-morbidities like obesity, diabetes mellitus, hypogonadism presenting with behavioral symptoms was discussed in the light of relevant diagnostic psychometry.

Key Words- Behavioral problems, Borderline intelligence, Diagnostic Psychometry

Introduction

Borderline intelligence is a state of compromised cognitive development where the cognitive deficit is neither as severe enough as mental retardation nor within the purview of normal intelligence. Rather it lies in the interface of these two groups. Borderline intelligence can be quantified as intelligence quotient (IQ) of 71 to 84 [1]. Compromised cognitive capacity limits an individual’s ability to think rationally, analyze appropriately and act accordingly as a result of which they commonly have difficulties in handling stress and challenges of day to day life. Behavioral problems are the result of improper management of stress and failure of coping strategies. The stress can be of any external cause (E.g.- environmental factors) or internal cause (E.g.- Maladaptive personality traits, Physical illness etc). Style of parenting and family members’ attitude towards the patient influences his or her conduct to a great extent. Harsh parenting, lack of warmth in relationships, high expressed emotion of family members may give rise to adverse consequences like maladaptive behaviors and externalizing behavior problems [2 - 6]. At times the behavior problems have some typical presentation which creates diagnostic dilemma and clinical interview including mental status examination may not draw any diagnostic conclusion. In such situations psychometric assessment proved to be helpful in substantiating the clinical diagnosis.

Case history

A 21 years old, young male was brought for psychiatric consultation by his parents. A history of intermittent aggressive and violent behavior, setting fire to house-hold objects, disrobing in front of others
and disobeying family members was reported. Total duration of illness was approximately 6 years with exacerbation of symptoms in the past 3 to 4 months. His sleep was normal. He had a voracious appetite and an abnormal eating pattern. He would eat flour cooked with water and vegetable curry. He would eat very quickly causing vomiting and he would eat that vomit as well. Patient reported that he did so because he would feel extremely hungry. He was stubborn and insisted on immediate gratification of needs. He would show disruptive behavior in the house by defecating in inappropriate places, keeping open the gas stove burner or by breaking household articles, when his wishes were not met or he was scolded for some reason. The patient also had sexual complaints like difficulty in erection and decreased libido. At the age of 16 years, he had rectal prolapse for which he was operated by mesh rectopexy. There was no history of head injury, seizure disorder, substance use or any other psychiatric illness in the past. Family history was not contributory. A history of prolongation of physiological jaundice during his neonatal period was reported. He was also reported to have had delayed developmental milestones and poor scholastic performance. He was a high school dropout. The patient used to have altercations with his father, brother and sister-in-law. Patient would often say that his father and brother would criticize or taunt him as he was unemployed. For the above complaints, he was treated by many psychiatrists with the diagnoses of Psychosis (Not Otherwise Specified) and Schizophrenia at different points of time with Haloperidol (up to 20mg/day), Risperidone (up to 6mg/day) and Olanzapine (up to 20 mg/day). With the latter two there was significant increase in appetite for which treatment was stopped abruptly before adequate trial. However, as per informants there was little improvement in his behaviors.

On physical examination, he was morbidly obese (weight – 132 kilograms, height- 165 cm and Body Mass Index of 45.3). All other physical and systemic examinations were within normal limits. On mental status examination, the patient was co-operative. He was conscious and oriented to time, place and person. Psychomotor activity was within normal limits. The patient was euthymic and no thought abnormality was reported. On laboratory investigations, his fasting and post prandial blood sugars were increased (128mg% and 168mg% respectively), glycated Hemoglobin A1C was 7.5. Rest of the hemogram and other routine investigations, liver function test, renal function test, thyroid function tests, serum prolactin, serum FSH, serum LH were within normal limits. His lipid profile was also within normal limits. His serum testosterone (8.3 nmol/lit) level was decreased. Serum cortisol level was within physiological range. CT scan of the brain revealed mild ventriculomegaly but brain MRI did not reveal any pathology.

In view of delayed developmental milestones and poor scholastic performance, IQ assessment was done using Verbal Adult Intelligence Scale [7] and Weschler’s Adult Performance Intelligence Scale [8]. His verbal IQ and performance IQ was found to be 83 and 65 respectively which corresponded to an average IQ of 74 (Borderline intelligence). Bender Gestalt Test [9] was administered to rule of organicity. Findings did not reveal any specific changes indicative of organic brain disorder. However, there were some findings which suggested a possibility of subnormal intelligence (E.g. markedly irregular use of space, collision tendency, change in angulation, flattened curvature, irregular sequence of figures) and inadequate impulse control (dashes for dots, irregular sequence). On Human Figure Drawing [9], the patient had drawn a male figure first. Features such as claw like fingers, fingers with no hands, angular body, straight lines and squared shoulders were indicative of aggressive tendencies in the patient. Furthermore, he seemed to have been experiencing feelings of dependency, helplessness and a desire for affection as revealed from drawing features like fingers fewer than five, mouth open and oval, arms over extended and reaching. Omission of neck in the drawing was indicative of immaturity, lack of impulse control and regression. The drawing also depicted the male figure pointing to a mango. This could reflect the patient’s obsession with food. Findings on the Sacks Sentence Completion Test [10] revealed that the patient had conflicts with family members and was discontented with the family...
environment. At the socio-economic level he tended to view his family as less privileged and seemed to experience a sense of deprivation. At the personal level, he viewed the family environment as hostile and unfavorable. He did not feel at peace in his own home, anticipated conflict and experienced anxiety and distress associated with the same. Patient seemed to have some conflict and dissatisfaction with his father. He wished that his father had been more sensitive towards patient’s needs, given him more attention and better education. His responses on the test also reflected a discontentment with the status of women in society. It is possible that the women in his house were dominated by male members and the patient was sensitive to the former’s needs.

The findings of psycho-diagnostic assessment suggested a possibility of behavioral problems associated with borderline intelligence and a dysfunctional family environment. The clinical history and mental status examination also corroborated with the findings of the psycho-diagnostic assessment. Therefore, a psychiatric diagnosis of borderline intelligence with behavioral problems was made.

For his deranged metabolic and hormonal profile, endocrinology opinion was taken. He was diagnosed to be suffering from diabetes mellitus with severe obesity with hypogonadism.

He was prescribed metformin 1000mg/day. For behavioral problems he was prescribed antipsychotic aripiprazole 10mg/day which was subsequently increased to 20 mg/day. The patient had shown significant improvement in his behavioral symptoms over a period of 4 weeks. His blood sugar was also well managed with metformin 1000mg/day. He was advised a high fiber and low calorie diet. He was also recommended regular aerobic exercise to bring down weight.

Discussion

In our case the patient was having obesity, diabetes mellitus, hypogonadism, borderline intelligence and behavioral problems. Regarding the physical co-morbidities – diabetes mellitus, obesity, and hypogonadotrophic hypogonadism are commonly seen together [11, 12]. Diabetes mellitus and hypogonadism association is not directly linked to the duration of diabetes [11, 12].

In this case hypogonadism and obesity resulted in sexual dysfunction and distorted self-image respectively. These acted as continuous potential stressors. Poor psychosocial support, high expressed emotion (critical comments by family members) and unemployment further added to the burden of stress. The patient due to his compromised cognitive state (Borderline intelligence) was unable to cope with the stress which resulted in behavioral problems.

The behaviour problems of the patient were mostly in the family context. The patient’s disruptive, disinhibited behavior and disturbed sleep was initially misdiagnosed as a part of psychosis by different psychiatrists and he was given trials of different antipsychotics. But a global assessment of the patient was never done before. Underlying physical illness was also ignored by family members though he was advised to consult a physician for his obesity.

In the initial period following hospitalization, a clear diagnosis was difficult as patient’s disruptive behaviors were not evident in the hospital settings. He was well behaved in the ward and showed socially appropriate behaviours when interacting with the treating team. On clinical evaluation and laboratory investigation, the patient was found to have diabetes and hypogonadism for which appropriate management was started. Considering the risk of worsening metabolic syndrome with atypical antipsychotics like – olanzapine, Risperidone, quetiapine, we had started the patient on Aripiprazole, which is an atypical antipsychotic without obvious risk of metabolic syndrome. To substantiate our clinical diagnosis we had done diagnostic psychometry.

Diagnostic psychometry is a set of psychological assessments in which multiple dimensions of an individual’s personality are assessed. It involves
assessment of personality dimension, dimension of cognition, neurotic and psychotic dimensions as well as the psychosocial aspects of the patient.

In our patient, we used VAIS and WAPIS to assess intelligence, whereas Human Figure Drawing and SSCT were intended to assess the personality dimension. He was cooperative during interviews and assessment. He acknowledged that he was not as intelligent as his brother because of which family members mistreated him. This would make him angry. He admitted that if they gave him love and respect he would also behave well with them. Thus, psychometric assessments were helpful in making the diagnosis more clear. Unfortunately most institutions in our country have a scarcity of clinical psychologists and non-availability of psychological assessment tools in majority of the centers due to which a global psychological assessment of patients is often not possible. This case report is an exemplary work showing the relevance of diagnostic psychometry in psychiatric disorders.

References