CASE REPORT

A case study of ADHD with co-occurring elimination disorder in a seven-year-old girl

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ABSTRACT

Attention-Deficit Hyperactivity Disorder (ADHD) is frequently identified as the predominant neurodevelopmental disorder among children. It is important to note that ADHD commonly co-occurs with other conditions, such as Elimination Disorders, including Enuresis and Encopresis. We are presenting the case of a seven-year-old adopted girl child with no birth history, exhibiting symptoms indicative of attention deficits, hyperactivity, and urinary and faecal incontinence. The adoptive mother informed that age-appropriate milestones were achieved at the time of adoption. The inattentiveness of the child was discovered at the age of six when she was in school. Her father passed away when the child was four years old. The child displayed delayed bladder and bowel control, in addition to being stubborn, restless, and disobedient. In an atmosphere of an abusive family for four years, the child was bullied by outsiders, exposed to the mother's physical abuse, and showed poor academic performance at school. For the management of these behavioural issues, an effective intervention of behavioural modification including reinforcement, and parental counselling was employed. This case paints a picture that underscores the interplay of environmental factors, biological factors, and psychological factors.

Keywords: ADHD, elimination disorder, neurodevelopmental disorder, behavioural modification

INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is a collection of symptoms that leads to a common behavioural route that may be used to address a wide range of emotional, psychological, and/or learning difficulties.[1] Children with ADHD exhibit symptoms such as inattentiveness, difficulty organizing tasks, impatience, and inability to engage in leisure activities quietly.[2]

Encopresis refers to the repeated passing of faeces outside of the toilet, while enuresis is the repeated passing of urine in places other than the toilet. These behaviours may or may not be intentional.

Whether deliberate or involuntary, urinating must cause substantial distress or functional impairment or occur at least twice a week for a minimum of three months in order to be considered as an enuresis. Additionally, this behaviour should not be attributed to medication side effects or general medical conditions.[2]

Defecating in inappropriate locations repeatedly, at least once a month for three months, is a defining characteristic of Encopresis.

Children must be at least four years old to meet the criteria for encopresis, and the behaviour should not be exclusively attributed to medications or medical conditions or other than constipation. [2]

Population surveys suggest that Attention Deficit Hyperactivity Disorder (ADHD) affects around 5.29% to 7.1% of the global population.[3] In India, the prevalence of ADHD ranges from 2% to 17%.[4]

Regarding Elimination Disorders, enuresis has an estimated prevalence of 5% to 10% among 5-year-olds, while approximately 1% of 5-year-olds experience encopresis.[2] Research has emphasised the comorbidity between Nocturnal

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Enuresis (NE) and Faecal Incontinence (FI) in children with ADHD, as well as the reciprocal relationship between ADHD and NE/FI.[5]

CASE STUDY

A seven-year-old girl was referred for counselling from her school due to her inattentiveness and restlessness. Her mother presented complaints of difficulty sitting in one place, lack of control over bladder and bowel movements, hitting family members, inability to sit for long periods while studying, stubbornness, non-compliance with instructions, and a lack of proper toilet training. The child struggled to sustain attention for more than five minutes and found it challenging to remain seated for extended periods. Her birth history revealed that she is an adopted child and was underweight at the time of adoption. The child was exposed to a violent environment since childhood, with her father frequently physically and verbally abusing her mother and she has also been bullied for being adopted. The girl was first admitted to school at the age of three. The very next year her father died due to excessive sleeping pill consumption when she was four. One year later, her school teachers noticed and reported to her mother that she was easily distracted and unable to hold her attention for more than five seconds. However, due to being a single mother, she was unable to notice the child's behaviour. It was only when her academic performance steadily declined that the teachers reported the matter to the mother, prompting her to take notice. She had been restless since childhood, but her inattention problem was specifically noticed when she turned six. Additionally, the child cannot hold her bladder at night and also experiences faecal incontinence without constipation or overflow. The child didn't listen to her mother when spoken to directly and displayed stubbornness. At times, she hit her family members, including her mother. The behavioural observation revealed that the child's attention was easily aroused but could not be sustained; she could not sit in one place for more than five minutes. Throughout the session, she repeatedly stood up and looked around, eventually leaving the room to watch others. This behaviour was consistent with her actions during the first session, even though she was with her mother. Her general intelligence level appeared to be average. The observed objective effect was that the child seemed to be cheerful. To assess the child's issues, the Vineland Social Maturity Scale (VSMS)[6], Binet Kamat Test of Intelligence (BKT)[7], Child Symptom Inventory - 4 (CSI-4)[8], and Conner's 3[9] Parent Rating Scale(s) were administered. The test findings indicated a borderline level of social adaptive functioning (SQ=73) and an average level of intellectual functioning (IQ=94), alongside features of Attention Deficit Hyperactive Disorder, Enuresis, and Encopresis. Subsequently, a treatment or intervention plan was developed with her mother. Psychoeducation and parental counselling were conducted in three sessions, followed by the compilation of problematic behavioural lists from her mother, as shown in Figure 1. Short-term and long-term goals were then identified, and behaviour modification techniques, according to the lists shown in Table1, were initiated. After eight sessions, a daily routine was established, and long-term strategies for addressing enuresis and encopresis were implemented, including fluid management, dry bed training, scheduled toilet times, positive reinforcement, and dietary adjustments.

Figure 1 Identifying Behaviour Problem

NAME: Hidden SEX: Female INFORMANT: Mother

AGE: 7 years

SL. NO.	Problem Behaviour	Priority	Maladaptive/ Deficit Behaviour	Target behavior	DETAILS
1.	Does not stay in one place for a long time	1	deficit behaviour	✓	Home and school
2.	Does not follow her mother's instruction	2	Deficit-behaviour	✓	Home
3.	Hitting family members	4	Maladaptive behaviour	✓	Home
4.	Does not want to study.	5	Deficit behaviour	✓	Home and school
5.	Urinates and defecates in the pants	6	Deficit Behaviour		Home and school

Table 1 Short-term and long-term goals

Sl No	Target Behaviour	Frequency	Antecedents	Consequences	Management Procedure	Reinforcer Identified
1.	Does not want to study	2-3/ day	Roaming around the garden	Forced for study	Positive Intermittent reinforcement like Fixed Ratio Schedule	Playing with a toy.
2.	Hitting family members.	4-5/day	Demands were not fulfilled.	The mother also hits the child.	Punishment is like restraint. The mother was tying the child's hands together for 1 minute.	
3.	Does not follow the mother's instruction	6-7/ day	Playing with a toy.	The mother criticised the child.	Continuous Reinforcement. The mother was given kisses and praises for following each instruction.	Getting praises and kisses.
4.	Does not stay in one place for a long time.	7-8/day	Mother was busy with household work	The mother scolded the child.	Make a structured routine for daily life. Different home-based techniques (i.e. puzzles, joining dots, building words, passing balls) were used to increase the sitting and attention span of the child and afterward, she received reinforcement from her mother.	Getting attention and praise from mother.

The child also requires special education and occupational therapy to receive proper guidance in education and skill training for daily living activities.

DISCUSSION

The case study highlights a complex interplay of environmental, developmental, and psychological factors contributing to her behavioural difficulties. A comprehensive understanding of her background, including her history of adoption, exposure to violence, and the loss of her father, underscores the importance of considering familial dynamics and problem-focused experiences in shaping her psychological functioning.

According to the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5),[2] the child exhibits symptoms consistent with Attention Deficit Hyperactivity Disorder (ADHD). Her difficulties in sustaining attention, restlessness, and impulsivity are characteristic of ADHD, as evidenced by her performance on standardized assessments by the Conners 3 Parent Rating Scale.

The presence of enuresis and encopresis, according to the DSM-5, may be linked to her not receiving proper toilet training from her mother. The lack of proper attention from her mother, coupled with instances of physical

punishment, likely contributed to the child's behavioural problems, such as hitting family members, in an attempt to gain attention.

The intervention approach adopted for the child encompassed behaviour modification techniques. Addressing the child's behavioural challenges necessitated a multifaceted intervention that not only targeted her symptoms but also involved her primary caregiver, her mother. Psychoeducation provided the mother with insights into the girl's psychological difficulties and equipped her with strategies to support her daughter effectively. Parental counselling aims to improve the mother's understanding of her daughter's needs, enhance her parenting skills, and facilitate a supportive home environment conducive to the girl's psychological well-being.

The long-term treatment goals aimed at addressing elimination disorders such as nocturnal enuresis and encopresis, evidence-based behavioural techniques were proposed after the session. Dry-bed training, for instance, is a behavioural intervention commonly employed to manage nocturnal enuresis. This method is grounded in an operant learning model, involving the shaping of the child's wakefulness through a predetermined waking schedule, positive practice (wherein a child exercises getting out of bed to use the restroom even when they don't have the need for urine), and punishment for bedwetting through training in cleanliness.[10]

A medical treatment plan focused on overflow management was recommended for encopresis, alongside Enhanced Toilet Training (ETT). ETT integrates behavioural strategies with medical management and has effectively treated encopresis. Alongside skills building and positive reinforcement for self-initiated toileting and faecal accident prevention, ETT includes educating parents and children about the physiology of overflow incontinence, teaching and modelling appropriate defecation dynamics, and exercises aimed at improving the child's control over the external anal sphincter muscle.[11]

Since ADHD is a neurodevelopmental condition, so behavioural therapy alone cannot sufficiently support the child; there are other domains in which the child needs assistance. Special education was recommended to improve the child's educational development, and an occupational therapist was recommended for the development of basic skills necessary for daily living activities.

CONCLUSION

ADHD often co-occurs with Elimination Disorder, yet there is limited research providing guidance for managing these comorbid conditions. While effective parent counselling, skill development, and educational training can reduce the severity of ADHD, it is not curable over time. For Elimination Disorder, dry bed training and ETT can be useful, albeit through a trial-and-error process.

Further goals should involve school guidance, occupational therapy, and addressing any behavioural issues not yet targeted. In the future, effective behaviour modification techniques should be incorporated, and a proper treatment plan developed to simultaneously address the comorbid conditions.

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Conflicts of interest: None

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