

CASE REPORT

Developmental Dysgraphia in a 6-Year Old Boy: A Case Report

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Introduction

Dysgraphia as a problem with handwriting, affects children's performance in academic activities and participation.¹ Developmental dysgraphia can be characterized as the disorder of written expression problems that writing skills are substantially below the expected level given the child's chronological age, assessed intelligence, and age-appropriate schooling.^{1,2} It is also defined as a problem with expressing thoughts by writing and a partial incapability to remember how to write certain alphabet or arithmetic symbols.³ Initially, it was included in the description of dyslexia and later it was differentiated as a component within the broad spectrum of writing disorders, referring specifically to spelling, and illegible handwriting.⁴ Some authors recommend that deep dyslexia, dysphasia and dysgraphia share a common phonological shortage.^{2,5} Dysgraphia can be a symptom of other neurological disorder such as epilepsy.^{4,6,7} Cognitive developmental researchers tend to use the term dysgraphia to apply only to the cognitive aspects of spelling, whereas those interested in writing difficulties use it to refer to motor difficulties in handwriting. The prevalence for developmental writing disorders is about 7-15% among school going children, where boys being more affected than the girls.⁴ The prevalence of all learning disorder

(including impairment in writing, reading and/or mathematics) about 5-15% globally.² Problems in writing and in other school-related motor skills are encountered quite frequently at school and in clinical practice. It is estimated that 5 to 20% of all children show no optimal fine motor behavior, including writing disorders.⁸ Many of the children may have possibilities to be undiagnosed and untreated in a country like Bangladesh where there is limited research on dysgraphia. Here, we aimed to report a case of developmental dysgraphia in a 6-year-old male child presented with behavioral problems.

Case report

A 6-year-old male, Muslim child, with average intelligent level, hailing from urban background with lower economic upbringing presented to us with the complaints of getting easily annoyed which is expressed mostly with his mother, school refusal, irritability, episodic temper tantrums and initiating fights with siblings for the last 6 months. He was born by normal vaginal delivery without any complications during antenatal, natal-and post-natal period. His milestones of all domains were age appropriate and he has no history of mental illness in the family. His socialization as well as relationship with friends were good. Linguistic assessment revealed that, the child can understand all simple and complex sentences signify the adequate receptive language development. Expressive

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language assessment revealed, a good meta-linguistic competences and phonemic awareness, however, there was spelling error in alphabet letter and also in words which signified disordered written expression (Fig 1). As per criteria of Diagnostic and Statistical Manual of Mental Disorders fifth edition, writing expression disorder was assigned to the boy. He was prescribed with Sertraline 25 mg once daily in the morning with linguistic intervention on writing expressive language as non-pharmacological management and advised further follow up. Follow up after 3 months revealed gradual decrease of behavioural problems with significant improvement in writing errors (Fig 2). Ethical issues were maintained accordingly and written informed consent is taken for publication of the report from the patient.

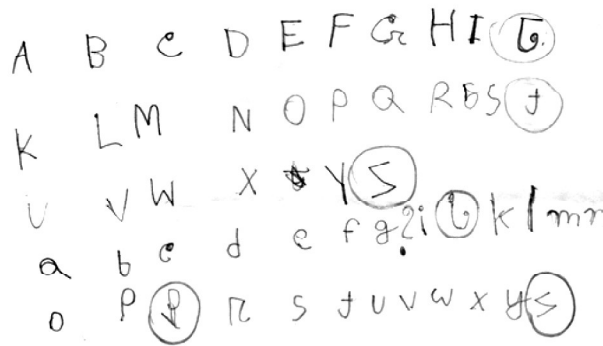


Fig 1 Initial presentation

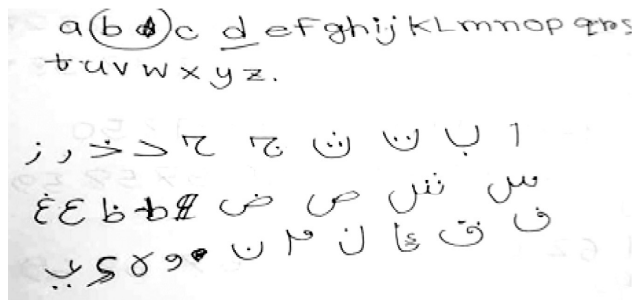


Fig 2 Follow up after 3 months

Discussion

We report this case as a developmental dysgraphia in Bangladesh. This 6-year-old boy from lower economic upbringing presented with school refusal along with behavioural problems. Though sometimes there might have overlaps between the specific learning disorder. He was assigned the diagnosis of dysgraphia.² The current patient had

the developmental form of dysgraphia whereas it can be presented and reported in old age also.^{4,6} Handwriting is a complex expertise which requires formal instruction in the initial three years of primary school as it is much more than alone motor act. Developing skilled hand writing requires an integration of perceptuo-motor, spelling and reading skills.⁹ However, handwriting and fine motor problems are the most common reasons to refer to professionals, especially school-based intervention teams. About 10-30% of normal school-aged children and 90-98% percent of children owing developmental and learning disabilities have been reported to experience difficulties in handwriting skill.¹ Dominancy of hand can be a factor and may affect hand performance in children with dysgraphia.^{1, 10} Nevertheless, in recent years the attention has been increased to intervene the dysgraphic handwriting as some children start too young and have a short attention span, sometimes losing grip on letterform instructions and consequently show slow progress.⁹ Management of such patients require coordination with the school teacher and sometimes school teachers notice the problem first and refer for interventions. Since developing handwriting is primarily amalgamated by the school system, communication between teachers and therapists is an imperative.⁹ Teachers should make aware of the signs and symptoms of dysgraphia and consider few aspects before dismissing a child from school due to having sloppy handwriting. If teachers start to see the trend of illegible writing, it is appropriate for them to question whether this child has dysgraphia or not. Teachers may identify the difficult parts of the writing process of his or her students.³

Conclusion

Neuro-developmental disorders sometimes present with behavioural disturbances of children. So meticulous history and index of suspicion is warranted to evaluate the child and adolescents with psychiatric disorders. This case report would explain the phenomenology of writing expression disorder better.

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