the discrepancy between the MSLT findings and the lack of subjective sleepiness are further noteworthy features. As the failure to recognise the complaints as cataplectic has had a profoundly negative effect on our patient's life, we would like to draw attention to isolated cataplexy as a possible diagnosis in cases of unexplained falls, 'fainting' spells, and pseudoseizures.

References

GELARDI, J. M. & BROWN, J. W. (1967) Hereditary cataplexy. *Journal of Neurology, Neurosurgery and Psychiatry*, **30**, 455–457.

GUILLEMINAULT, C. (1976) Cataplexy. In *Narcolepsy. Advances in Sleep Research* vol. 3 (eds C. Guilleminault, W. C. Dement & P. Passouant), pp. 125–143. New York: Spectrum.

———, WILSON, R. A. & DEMENT, W. C. (1974) A study on cataplexy. *Archives of Neurology*, **31**, 255–261.

———, HOLLOMAN, J., GRUMET, C., *et al* (1988) HLA-DR2 and the narcolepsy syndrome: the Stanford experience. In *HLA in Narcolepsy* (eds Y. Honda & T. Jugi), pp. 108–113. Berlin: Springer.

HARTSE, K. M., ZORICK, F. J., SICKLESTEEL, J. M., *et al* (1988) Isolated cataplexy: a familial study. *Henry Ford Hospital Medical Journal*, **36**, 24–27.

ROTH, B. (1962) *Narkolepsie und Hypersomnie vom Standpunkt der Physiologie des Schlafes*. Berlin: VEB Verlag Volk und Gesundheit.

——— (1980) *Narcolepsy and Hypersomnia*. Basel: Karger.

VELA BUENO, A., CAMPOS COSTELLO, J. & JIMENEZ BAOS, R. (1978) Hereditary cataplexy: is it primary cataplexy? *Waking and Sleeping*, **2**, 126.

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Depression in Autistic Disorder

M. GHAZIUDDIN and L. TSAI

Depressive illness in a patient with Down's syndrome and autism responded to fluoxetine. The importance of diagnosing superimposed depression in people with developmental disorders is emphasised.
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Autism is a developmental disorder characterised by a marked impairment of reciprocal social interaction, language and play. Although people with autism are no longer perceived as being incapable of experiencing emotions and feelings, clinical depression in this population has been rarely reported. Komoto *et al* (1984) described two adolescents with periodic mood swings; the symptoms resembled those of bipolar affective disorder and responded to carbamazepine. Gillberg (1985) described a patient with Asperger's syndrome, widely regarded as a mild variant of autism, who developed manic–depressive illness and also had a family history of that disorder. We present the case of a 17-year-old autistic boy who developed major depression. In addition to being autistic, this patient also had Down's syndrome. To our knowledge, no case of depression has been described in a person with both these developmental disorders.

Case report

M is a 17-year-old white boy with Down's syndrome. He lives with his parents and is the eldest of three children. He is classified as moderately mentally retarded and has a full-scale IQ of 48 on the revised Wechsler Adult Intelligence Scale (Wechsler, 1981). His verbal and performance IQs are 52 and 49 respectively. On the Vineland Social Maturity Scale (Sparrow *et al*, 1985) his social age is 6.3 years. He attends a special education programme for mentally retarded children.

He was referred by his mother for aggressive outbursts and frequent spells of crying. The exact onset of the symptoms was not clear. However, it was reported that M's behaviour started progressively worsening a few months after he changed schools. This was about a year before the referral. He began to display aggressive outbursts and temper tantrums, at one time throwing a chair at his teacher. From being pleasant and even tempered, he became irritable and frequently cried. He would, for example, sit crying at the dinner table and refuse to eat. When asked why, he would say "M not happy," but could not elaborate. He had always enjoyed watching television with his family, but now he would often sit alone for long periods in his room, sometimes crying. His sleep pattern began to change. He would go to bed late and also wake up early, around 3 a.m. and wander around aimlessly. He became more socially withdrawn,

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refusing to go out. In addition, he started complaining of vague physical complaints such as fatigue and facial pains. There was, however, no evidence of suicidal ideas.

His family history did not reveal anything significant. There was no history of mental retardation or any major mental illness such as depression.

M had a full-term normal delivery. Because of his facial appearance, he had a chromosomal analysis at nine months and was diagnosed as suffering from Down's syndrome. As an infant, he cried little and was regarded as a 'good baby'. Although he sat at five months and started walking at 11 months, his speech was delayed – he spoke his first words at three years. At five years he could use only a few words but his receptive skills appeared better developed. He seldom used pronouns and always referred to himself by name. At the time of the referral, communication tests revealed that he had receptive language ability at about the four-year level. He was able to initiate two to three phrases, but had difficulty with longer units. He had dysfluencies and blocking on initial consonants, usually in a nasalised distortion. In addition, he had the habit of making irrelevant remarks, such as suddenly talking about television in the middle of a conversation about school, and showed both perseveration and echolalia.

His play was described as repetitive and dull. As a child, he always carried a doll with him and at the time of referral showed an undue attachment to two toy ducks. He seldom joined in any group activity and if placed in a group would not participate. He did not have any friends. He liked listening to music but insisted on playing the same records.

At interview, when asked how he was feeling, he repeated the question and replied: "M not happy". Although he seemed to take little notice of the examiner, he kept repeating the examiner's questions. He made no attempt to look at the examiner. He sat rocking continuously but showed no other abnormal movements. He appeared depressed and showed some evidence of psychomotor retardation. There was no suggestion, however, that he suffered from any defect of thought or perception.

He had not been diagnosed as autistic before referral to our clinic; however, based on the developmental history and the examination, it was felt that he met the DSM-III-R criteria (American Psychiatric Association, 1987) for autistic disorder: gross impairment in the ability to make peer relationships; marked abnormalities in content and form of speech such as echolalia and frequent irrelevant remarks; some undue attachment to objects; marked distress over changes, and insistence on following the same routines; and a restricted range of interests. The onset appeared to be in early childhood. On the modified Autism Behavior Checklist (Krug *et al*, 1980), based on the information gained from both parents independently, he scored 69 and 66, which is close to the mean score of 77 obtained by Krug *et al* on their sample (Table 1). This check-list is not diagnostic of autism but can be used to support the clinical diagnosis.

As this was the patient's first contact with our clinic and as some of the symptoms such as social withdrawal and restriction of interests may also occur in autistic disorder, it was decided to follow his symptoms more closely. He was, therefore, reassessed after 12 weeks, at which point his mother reported a significant increase in his symptoms, especially in his crying spells and social withdrawal. An examination confirmed his deteriorating affect. On the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960) he scored 14, although some of the items, such as guilt and subjective symptoms of anxiety could not be rated. This scale has been successfully used in persons with mental retardation, with the language simplified to ensure maximum comprehension (Kazdin *et al*, 1983; Reynolds & Baker, 1988). A diagnosis of a DSM-III-R major depressive episode was made based on the following symptoms: depressed mood, diminished interest in pleasurable activities such as watching television, insomnia, some decrease in appetite, fatigue, and psychomotor retardation. After discussion with his parents, he was started on oral fluoxetine hydrochloride (20 mg daily).

Table 1
Scores on the Autism Behavior Checklist[1] in each symptom area

Symptom area	Mean scores of Krug *et al*'s autistic sample	Patient's scores	
		rated by mother	rated by father
Sensory	12.67	9	9
Relating	23.99	8	8
Body/object use	15.79	9	9
Language	12.20	26	25
Social	12.80	17	15
Total	77.49	69	66

1. Krug *et al* (1980).

Four weeks later, he was reassessed. His mother reported that he was better. His crying spells decreased substantially, and for the first time in months he was seen smiling. He started eating his meals with his family and was not spending as much time alone in his room. However, he was still having some difficulty going to sleep although he was no longer waking up early. At interview, he looked brighter but did not say much. His HRSD score dropped to 7. However, when reviewed four weeks later, his mother reported that, although he continued to be generally stable in his mood, he was still having occasional crying spells and was also somewhat irritable. This may partly have been related to his father's going on a visit out of town, for which M had not been prepared in advance. At interview, there was no significant change in his affect. His HRSD score also stayed at 7. In view of his persistent symptoms, it was decided to increase the dose of fluoxetine to 40 mg daily.

He was reviewed after a month, when he appeared brighter than ever before. He smiled spontaneously and said "M happy". His crying had almost stopped and he had started watching television with his family again. His teachers were pleased with his improvement, especially with his new hobby, swimming. His sleep had also improved. His HRSD score had dropped to 4. Six months after his initial contact with our clinic, M continues to remain stable in his mood, although his autistic symptoms remain unchanged.

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Discussion

Assessment and diagnosis of depression in autistic persons poses particular difficulties. Some of the depressive symptoms, such as social withdrawal and reluctance to interact with others, may be mistaken for the core symptoms of autism. This is especially true of patients with coexisting mental retardation and gross problems with communication. This may explain why most reported cases of affective disorder in autism have been described in patients with higher levels of intelligence and better verbal skills. The above case shows that depression can be diagnosed and treated in less able patients as well.

It is interesting that this patient, in addition to being autistic, also suffered from Down's syndrome. It is generally believed that autism rarely coexists with Down's syndrome. Indirect support for this view comes from an epidemiological study by Wing & Gould (1979) of social impairments in children under 15: of 30 children with Down's syndrome in the sample, 27 were classified as socially severely retarded, one as aloof, one as passive and odd, and only one as autistic. The authors speculated that certain organic disorders, notably Down's syndrome, appeared to leave those functions of the brain intact which were responsible for the development of social interaction, but produced other cognitive deficits resulting in a sociable mentally retarded child. Yet, despite their stereotype of being friendly and sociable, it is now accepted that patients with Down's syndrome may also present with behavioural problems. While most of these patients may have a pleasant and stable temperament, some appear to be restless, aggressive and difficult to manage (Gibson, 1978). Indeed, a wide variety of psychiatric disorders has been described in this population, including conduct disorder, depression and autism (Gath & Gumley, 1986; Bregman & Volkmar, 1988). While the coexistence of Down's syndrome and autism in our case may be entirely due to chance, it is possible that this association is more common than generally assumed, especially in those patients with Down's syndrome who present with behavioural disorders.

Depression is a common psychiatric illness. Clinicians working with autistic and other developmentally disabled patients should be aware of its possibility, especially while assessing patients with behavioural problems. This is because, even in this population, its successful treatment, as in the present case, can lead to a substantial improvement in the quality of life.

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References

American Psychiatric Association (1987) *Diagnostic and Statistical Manual of Mental Disorders* (3rd edn, revised) (DSM-III-R). Washington, DC: APA.

Bregman, J. D. & Volkmar, F. R. (1988) Autistic social dysfunction and Down syndrome. *Journal of the American Academy of Child and Adolescent Psychiatry*, **27**, 440–441.

Gath, A. & Gumley, D. (1986) Behaviour problems in retarded children with special reference to Down's syndrome. *British Journal of Psychiatry*, **149**, 156–161.

Gibson, D. (1978) *Down's Syndrome: The Psychology of Mongolism*. Cambridge: Cambridge University Press.

Gillberg, C. (1985) Asperger's syndrome and recurrent psychosis – a case study. *Journal of Autism and Developmental Disorders*, **15**, 389–397.

Hamilton, M. (1960) A rating scale for depression. *Journal of Neurology, Neurosurgery and Psychiatry*, **23**, 56–62.

Kazdin, A. E., Matson, J. L. & Senatore, V. (1983) Assessment of depression in mentally retarded adults. *American Journal of Psychiatry*, **140**, 1040–1043.

Komoto, J., Usui, S. & Hirata, J. (1984) Infantile autism and affective disorder. *Journal of Autism and Developmental Disorders*, **14**, 81–84.

Krug, D. A., Arick, J. & Almond, P. (1980) Behavior checklist for identifying severely handicapped individuals with high levels of autistic behavior. *Journal of Child Psychology and Psychiatry*, **21**, 221–229.

Reynolds, W. M. & Baker, J. A. (1988) Assessment of depression in persons with mental retardation. *American Journal on Mental Retardation*, **93**, 93–103.

Sparrow, S., Balla, D. & Ciccetti, D. (1985) *Vineland Adaptive Behavior Scales* (classroom edition). Circle Pines: American Guidance Service.

Wechsler, D. (1981) *WAIS-R Manual*. New York: Psychological Corporation.

Wing, L. & Gould, J. (1979) Severe impairments of social interaction and associated abnormalities in children: epidemiology and classification. *Journal of Autism and Developmental Disorders*, **9**, 11–13.

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