

## Violence and Asperger's Syndrome: A Case Study

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A recent review of the clinical features of 'autistic personality disorder' (Wing, 1981), originally described by Asperger (1944), emphasised the diagnostic primacy of the impairment of two-way social interaction shown by such patients, who reveal a profound lack of empathy for others. They appear unable to perceive the meaning or implications of the expressions and gestures of others, and such non-verbal behaviour in other people is often misinterpreted or ignored. There is usually a corresponding poverty, or other abnormality of non-verbal expression by the patient. Speech may be delayed, but the understanding of the spoken word is not, and a good command of language is usual in adults. However, the speech is often pedantic, repetitive (especially on subjects dear to the patient), and circumstantial; a monotonous lack of intonation is common, rendering the voice inexpressive and idiosyncratic. Those with the syndrome are usually inflexible in other ways: they frequently favour repetitive, familiar activities and become closely attached to certain possessions or places. Play in childhood is similarly restricted and 'pretend games', especially those which involve taking on another identity, are strange to the affected child, and rarely played. Similarly, they often develop an intense interest in a chosen field, such as astronomy or chemistry, on which they are prepared to expound at great lengths, being insensitive to the reaction of the listener. Gait and posture are frequently clumsy, manneristic, and ill-coordinated.

Clumsiness, like the other features, dates back to infancy. A history of abnormalities of the baby's response to the mother may often be elicited, but the problem usually becomes conspicuous when the child is three or four years old. Individuals with the syndrome have particular difficulties in peer relationships, and in childhood, the closest relationships are usually made with adults.

The present report concerns one patient who demonstrates all these clinical features but has developed, in addition, interests and behaviour which pose considerable potential hazards for others and which led to his continued detention in a Special Hospital.

Dangerous behaviour in association with the syndrome has not been described in any detail previously, although in her review, Wing (1981) wrote that "a small minority have a history of rather bizarre anti-social acts, perhaps because of their lack of empathy. This was true of four of the present series, one of whom injured another boy in the course of his experiments on the properties of chemicals". Details of the incident are not further elaborated, but are of relevance here, since an interest in chemicals and their potential as the means for homicide are important features of our patient's presentation.

Wolff & Chick (1980) summarise the main features of the patients described by Asperger (1944): in one case, the emotional disturbances were illustrated by "cool threats to stab the mother", while more generally, "extreme personal sensitivity and egocentrism associated with callousness towards others" were observed. Their own series of 20 boys described as suffering from "schizoid personality in childhood" probably includes patients with Asperger's syndrome, although they did not use his criteria in diagnosis. One of the 20, ten years after diagnosis, was in the Scottish State Hospital at Carstairs, after an assault on a patient in a conventional psychiatric hospital.

### Case Summary

A British male, aged 44. His father is a retired engineer in his late sixties and is a stable and forbearing man; his mother is some years younger, and is more distressed than her husband about her son's problems and situation. Both parents are intelligent and emotionally stable. The patient's sister (40) is normal and of above average intelligence. A maternal aunt is said to have had schizophrenia.

The patient was born at full-term by a forceps delivery, after a normal pregnancy. Marked moulding of his head was noted, but perinatal details were otherwise unremarkable. His parents cannot remember clearly precise details of his behaviour as a baby, but no abnormalities in his speech, motor, or affective development were noted by them until he was aged three. They did remember that before that, he was unusually placid, his face was expressionless, and his voice monotonous. He has always seemed aloof and indifferent to them, and occasionally refused to answer their questions.

He had unusual interests from an early age. He liked to touch people's hair (and this would sometimes be his first approach to them). He was fascinated by colour and liked to colour geometric patterns, particularly if he could use tubes of paint. His greatest interest was in water-pipes, for which he made up his own names such as 'simpipipes' and 'withapipes' to denote particular kinds.

His activity never involved role playing and was unusually restricted and not like other children's play. For example he liked to play with electrical gadgets and could rewire a plug at the age of four. He was (and is) unable to pretend. In later childhood, he developed a particular interest in chemistry and electronics.

From a young age, he often rocked repetitively. He disliked any change in his environment and would restore objects in the family home to their original position if any of them were moved. He preferred to be on his own from an early age and never showed an interest in playing with other children. Later, at boarding school, he was lonely, isolated, and frequently absconded home from school. His parents could not recall any early abnormalities of movement or physical coordination.

In childhood, he developed a fear of dogs and became distressed by high-pitched noises, especially of singing, but the reasons for these attitudes were obscure.

From the age of five, abnormal behaviour became increasingly evident. He was isolated, did not mix with other children, and was frequently teased because of his odd social manner and his enuresis and encopresis. (Faecal impaction and overflow remain management problems in his 40s). His marked interest in chemistry, radio, and other mechanical subjects was noticed in childhood.

At 16, he was referred to a Child Guidance Clinic because of absconding from school and also because of his peculiar speech and ill-coordinated and stereotyped movements. It was clear that he was still being bullied, and greatly over-rated his own ability in mathematics. At this time, his parents agreed that his knowledge was superficial, even of subjects of interest to him. He was felt to suffer from "an early case of schizophrenia because he showed the elements of thought disorder, affect disturbance and a withdrawn attitude at home". On phenothiazines, positive improvement was described by his parents within two months. Two months later, however, his headmaster noticed that he was talking to himself and that the stereotyped movements had returned; six months after the initial assessment, it was felt that he was no longer suitable for ordinary schooling. His behaviour at the time was described as follows: "He had followed boys into the science lab and had been caught trying to take ammonium bichlorate. He had become 'girl mad' and had attempted to strangle a girl, having to be forcibly removed by five of the boys, later telling his headmaster that he had completely lost control of himself. This action, in conjunction with his undue interest in poisons, his stereotyped movements, talking to himself, and feeling that a voice was speaking in his mind, would appear to indicate that the schizophrenic process had not been arrested". Although admission to hospital was thought to be necessary, this did not happen for another four months. In the meantime, the

patient was described as having been "laying in wait for girls from the school", but this was not clarified further.

Soon after his admission to a psychiatric hospital, just before his 17th birthday, he was described as follows: "Weschler verbal IQ 133 . . . his strength lies in tracing new relationships in given data, especially in organic chemistry. His range of interests tends to be rather narrow and outside his field. His thinking tends to be schizoid but he appears to have the outlook of a research worker in pure science and his thought there is precise, to the point and effective; for instance a 'cushion' to him is a 'comfortable structure to put on a chair', and 'secluded' means 'to make private, to keep out of everybody's knowledge'. He promises to show a distinct flair for chemistry".

At 18, he dropped a firework into a girl's car and then stabbed her in the wrist with a screwdriver, fortunately causing little harm. His recent explanation of this was that he was jealous that she had a car, and that he does not like women drivers. Eight months later, he jumped on the back of a girl in a park, and said this was because of the way she was dressed. He was regarded as suffering from schizophrenia at the time.

At 22, he entered a neighbour's house with a knife because he was upset by the sound a dog was making; he kicked the animal and struck the owner, a girl, with a screwdriver. Three years later, he assaulted a crying child on a railway station by putting his hands over its mouth to stop its noise. No serious injury was caused.

He explained another attempt to stab a girl in the following terms: "I thought she was indecently dressed—she was wearing shorts". This attack was made with a hacksaw blade, which broke on the girl's clothing. Following these incidents, he was admitted to hospital (aged 29) and was described as follows: "His manner of speech was unusually slow but its content was not abnormal apart from it being over-precise. He showed manneristic behaviour, his affect was flat but, although admitting that the various attacks on the children and girls had been wrong, he did not appear to be at all distressed or remorseful. He dislikes the sound of a child crying, a dog barking, and a soprano singing. When he hears these sounds he feels completely compelled to stop them." The diagnosis was again of schizophrenia and soon after this, an opinion was sought on his suitability for a place in a Special Hospital.

This new assessment highlighted certain aspects of his speech—its scanning quality, the lack of intonation, and the tendency to continue to speak during inspiration of breath. His facial expression was noted to be largely immobile, notwithstanding certain tics and mannerisms. He spoke readily and freely about his attacks on people. He displayed high intelligence and talked cheerfully of his interest in guns, brass bands, chemistry, and mechanical matters. He readily admitted extreme distaste for high-pitched sounds, notably soprano voices, and said that he would like to deal with the source of such sounds in the same manner that he would deal with babies who cry. No delusions, hallucinations, or first-rank symptoms of schizophrenia were elicited. Commenting on his

dangerousness, note was made of the patient's inability and lack of desire to restrain his impulses to attack infants and women at certain times, especially when they made sounds he found unpleasant. Following one such attack on a crying baby in a supermarket, he was admitted to Broadmoor Hospital on a hospital order with restrictions.

Since admission, he has been noted to be physically clumsy and awkward, but without specific neurological deficit or extrapyramidal symptoms or signs. His speech is markedly abnormal, having a monotonous, staccato quality and he continues to speak, albeit unclearly, during inspiration. He walks with an odd, stiff gait and at times, when seated, rocks backwards and forwards. He displays a narrow repertoire of affective response, apart from being excited when he is engaged in discussions about chemistry or poisons. He now demonstrates a childlike, gleeful expression, but there is little inflection or subtlety of variation in his facial expression. He is, therefore, either gleefully grinning or flat in expression. Again, no psychotic features have been elicited. He denies sadistic sexual interest.

Psychometric testing on admission (WAIS) indicated a verbal IQ of 123 and a performance IQ of 94. The large discrepancy between the scores initially raised the possibility of an organic deficit, particularly involving the non-dominant hemispheres, but neurological examination and EEGs on admission and ten years later were normal.

An attempt was made to study his psychophysiological response to various stimuli previously noted to have caused violence or subjective distress; the patient was cooperative and showed interest in technical aspects of the procedure. He was asked to listen to a variety of musical sequences (including high-pitched soprano singing, bagpipes, an Indian raga, and several strident classical pieces) and a recording of a baby crying, while monitored on polygraph channels of respiration and heart rates and galvanic skin response (GSR). All musical items were received with pleasure, including the one which produced a change in the GSR. The baby's crying produced no such change. At re-testing, six months later, the same piece (Britten's War Requiem) again produced GSR changes, but now also caused subjective consternation and increased pulse and respiration rates. New recordings of a child's crying were presented and also produced GSR alteration, but no loss of inhibitory control ever occurred. There were differences of response between occasions and also within types of stimulus. The consequent difficulty of predicting the patient's response to high-pitched sounds suggested that treatment based on habituation techniques might be ineffective.

Throughout his lengthy admission, he has remained socially isolated and awkward, although not self-conscious. His fascination for chemistry and water pipes persists. He has repeatedly read one chemistry book from cover to cover, and shows a great interest in inorganic chemistry and in poisons; some weeks after a recent altercation with another patient, he admitted that he had contemplated poisoning him. He cheerfully described making cyanide "quite easily" from Prussian Blue paint in a children's paintbox. His otherwise uneventful stay has

been occasionally interrupted by sudden attacks on sources of high-pitched sound, such as the television or radio, which he has tried to destroy on each occasion.

Typically, he is to be found in the ward dayroom engrossed in a book, listening to brass bands through earphones. He dislikes any major alteration in his daily routine. He has no friends and appears quite untroubled by this; other patients tend to give him a wide berth, although he does not perceive this. In interview, he is always polite and cooperative, but conspicuously unable to read cues that suggest the interview is at an end. When asked to leave, he shows no embarrassment.

Early in his history, a psychotic illness was presumed, for which he had received phenothiazines for many years, but following a recent reconsideration, all medication was stopped. Within a few weeks (but not immediately), there was an increase in his clumsiness, but no tremor. Soon after this, he became increasingly preoccupied with women and, for the first time ever, started to keep a collection of pictures of naked women, which he carried openly, without self-consciousness, and indeed with satisfaction. This awakening of his heterosexual interest soon led to behaviour problems: he showed frank sexual interest in a female teacher and got as close to her as possible at every opportunity, sometimes following her about inappropriately. Some months after its cessation, he was put back on medication, with his consent, at reduced levels, and the marked sexual interest and associated problems rapidly diminished. The patient was pleased to receive the medication, feeling calmer as a result.

Recently, a preoccupation with witchcraft and cutting up babies was elicited. He said he would like to poison or shoot actresses, and admitted that were he married, his wife would be at risk; thoughts of violence to actresses occurred on most days, he claimed, but could be dispelled by turning his attention to thoughts of gear levers and steering columns. His attitude to women varies in this manner from concern with them as adored sexual objects, to their being potential victims of homicidal violence.

### Discussion

This patient illustrates a number of features typical of adults with autistic syndrome—the clumsiness, pursuit of circumscribed and unsocial interests, and lack of grasp of social situations. Perhaps more importantly, he showed marked impairment of non-verbal expression in social interactions.

The question arises, however, as to the exact nosological status of the patient's condition. It is, perhaps, impossible to establish whether he would ever have met commonly accepted criteria of 'early childhood autism' (Rutter, 1978), originally described by Kanner (1943). Understandably, his parents found great difficulty in giving a full developmental history so many years later, but some evidence was elicited for his having created, at least in part, his own separate language as a child. This did not persist into adulthood, nor was there

evidence of language-based cognitive impairment. In view of the dearth of developmental data, it is probably more appropriate to describe him as an 'adult autistic' or, following the recommendation of a working party of the National Autistic Society, by the more clumsy term 'more able autistic adult'. Although he was described in the past as having schizophrenia, the evidence for this is unconvincing: in particular, there has never been incontrovertible evidence of first-rank symptoms, or other abnormal beliefs or perceptions. It could be argued that many of his features represent the indications of a defect state, but his non-delusional and lively fascination for the subjects mentioned above renders him unlike most cases of schizophrenia. In addition, the affect disturbance was a feature from very early age, and remains largely unaltered at the age of 44.

Finally, there was no evidence of 'relapse' when he was taken off medication, although behavioural changes occurred. These features do not support the

diagnosis of schizophrenia.

The deficits consequent upon his disorder have an immediate bearing on his potential for dangerous behaviour. His impulsive attempts to silence sources of high-pitched sound are less frequent and his preoccupation with poisons and poisoning has remained rather more academic than applied. However, he is closely supervised and his environment prohibits access to many of the previous sources of irritation. His unusual candour reveals his strong dislikes readily, greatly facilitating his assessment, and although somewhat improved since admission, he is not felt to be ready to leave conditions of maximum security. It is anticipated that he will require long-term institutional care.

We submit the speculation that this association between Asperger's syndrome and violent behaviour is more common than has been recognised and that more such individuals are to be found in long-term care institutions of various sorts.

#### References

- ASPERGER, H. (1944) Die autistischen Psychopathen in Kindesalter. *Archiv für psychiatrie und Nervenkrankheiten*, **117**, 76–136.  
 KANNER, L. (1943) Autistic disturbances of affective contact. *Nervous Child*, **2**, 217–250.  
 RUTTER, M. (1978) Diagnosis and definition. In *Autism: A Reappraisal of Concepts and Treatment* (eds. M. Rutter & E. Schopler). New York: Plenum.  
 WING, L. (1981) Asperger's syndrome: a clinical account. *Psychological Medicine*, **11**, 115–129.  
 WOLFF, S. & CHICK, J. (1980) Schizoid personality in childhood. *Psychological Medicine*, **10**, 85–101.

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## Neuroendocrine Findings in Chronic Cocaine Abusers: A Preliminary Report

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This study examined the neuroendocrine status of 21 chronic cocaine abusers after cessation of use. Ending a binge of stimulant abuse is followed initially by a phase of severe dysphoria and hyper-somnolence (the 'crash'), which lasts one or more

days (Siegel, 1982). A second phase then consists of prolonged but less severe anergia and anhedonia, without hypersomnia (Siegel, 1982; Kleber & Gawin, 1984; Gawin & Kleber, 1984a; 1984b). Stimulant craving is low during the 'crash', but re-