



Asperger syndrome, violent thoughts and clinically isolated syndrome

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Abstract

A young man, 23 years old, with a clinically isolated syndrome (CIS), presented violent thoughts during a neurological consultation. He was diagnosed with Asperger Syndrome based on a psychiatric and (neuro)psychological examination. Possible risk factors for acting-out and the implications for treatment, if CIS would evolve to MS, are discussed based on a review of the literature.

Key words: Asperger syndrome; autism spectrum disorder; violent thoughts; clinically isolated syndrome; multiple sclerosis; aggression.

Introduction

The case report illustrates a young man with a Clinically Isolated Syndrome (CIS). Moreover he was diagnosed with autism spectrum disorder (ASD). Persons with ASD sometimes have violent thoughts and aggressive behavior. By means of a literature review the risk of acting-out and the selection of possible immunomodulating medication were investigated.

Case study

After being diagnosed with retrobulbar neuritis optica, a 23 year old man was referred for a neurological examination. There were no other neurological abnormalities. MRI of the brain showed seven white lesions and the analysis of the cerebrospinal fluid showed oligoclonal bands (which were not present in the serum), both results might suggest multiple sclerosis (MS) in an initial phase. Other causes such as auto-immune and infectious diseases were ruled out. The patient was not yet eligible for an immunomodulating treatment because no spreading of the brain lesions in time were recorded on the MRI and only two Barkhof criteria¹ were met. During a neurological consultation the patient mentioned having murder fantasies towards others. Addition-

ally, violence towards family members was ascertained and in this context a psychiatric and (neuro)psychological examination was requested. The diagnosis of an autism spectrum disorder, in particular Asperger Syndrome, was concluded.

During this clinical examination we met a poorly cooperative young man avoiding eye contact. His mood was dysphoric and anhedonia, feelings of emptiness and a passive death wish were present. The patient thinks in terms of black and white, rigid and absolute. He constantly runs into conflicts with his surroundings because he reckons that others in society do not respect the rules and agreements. He is convicted that these 'offenders' have no right to live. Influencing or correcting these thoughts is impossible. When someone for example crosses a white line in traffic, from his perspective this person deserves to die because he endangered others. He continuously feels as if he is on a different level than the rest of the world which causes annoyance, frustration and anger.

These feelings already originated in his childhood when his field of interest was different from that of his peers. He was fascinated by numbers, dates and patterns or logical links between causes. His school-career is filled with continuous harassments and humiliations. The patient describes himself as a clumsy boy that failed in gymnastics and ball sports. He has also trouble dealing with the changing (game) rules. The instruction in football to give as many passes as possible was interpreted literally, even when he was standing alone in front of the goal and just had to push the ball in.

When the probable diagnosis of MS was communicated to the patient his first reaction was one of incomprehension and disappointment. Afterwards he attested that to him it was unfair that he, who always stucked to 'the rules', was punished. However, after this announcement there was no noticeable increase of violent thoughts or actions. The patient was also told that he was diagnosed with ASD and he agreed

to follow a specific treatment, in particular, ASD-coaching. He did refuse all drugs.

Discussion

The Asperger Syndrome (2) is part of the autism spectrum and is characterized by limited or stereotypical interests and behaviors, disturbances in reciprocal social relations and in verbal and non-verbal communication. Those who suffer from Asperger syndrome show rigid behavioral patterns and often have a preference for order, discipline, organization and law. A relatively good speech and language development is typical, therefore the disorder is not noticed immediately in superficial contact (3). A subgroup of normally to highly gifted people with ASD is misdiagnosed because of the presence of overlapping symptoms between ASD and other psychiatric disorders that mask the actual diagnosis (4). The most important DSM-IV-TR (5) Axis I co-morbid disorders are mood disorders (6), psychoses (7, 8), anxiety disorders and obsessive compulsive disorders (9, 10). On DSM-IV-TR Axis II the co-morbidity is the highest with the schizoid, schizotypal (11, 12, 13, 14) and obsessive-compulsive personality disorders (10, 15). In clinical practice people with ASD are frequently incorrectly diagnosed as being schizophrenic (7, 8, 16) or falsely labeled as psychopaths (17). A thorough psychodiagnostic evaluation is thus necessary (18).

Baron-Cohen (19) hypothesized that those with ASD lack a 'theory of mind' (ToM). This 'mind blindness' could explain the social-emotional and communicative problems (20). ToM is the (intuitive) cognitive insight that others think differently (21). It is about understanding feelings, thoughts, convictions, desires and meaning of others, about realizing that everybody else has a different unique view of the world. The inability to understand and assess social situations correctly leads to a misunderstanding of others and a failure to put oneself in the position of others. This is called a lack of intersubjective resonance (22). Patients with ASD will sometimes get frustrated because of this lack of ToM which may lead to feelings of injustice and anger that can cause (reactive) antisocial behavior, interpersonal conflicts and criminal actions (17, 22). They often do not understand or consider the implications and effects of their behavior.

It is important to differentiate ASD from psychopathy, both characterized by a lack of empathy (23). Psychopathy indicates a *lack of emotional empathy*, an inability to feel. ASD rather indicates a *lack of cognitive empathy*, an inability to understand (17).

The association between ASD and aggression is unclear. The majority of ASD patients adhere strictly to the (social) rules. Violations that lead to aggression are rather rare (23). But it does happen that people with ASD act violently. Disturbing behavior, including aggression, is often mentioned but does not seem to be a core symptom of people with Asperger syndrome. On the other hand, there is probably an underreporting about ASD in forensic settings. Daems *et al.* published in 2003 that there are indications of an association between ASD and aggression in the literature. However, currently there is insufficient scientific proof to state this unambiguously (24).

The majority of case studies on patients with ASD that were violent turned out to have a psychiatric comorbidity. Findings suggest that a lack of mental health forms a risk factor for violent behaviour with ASD (25, 26). The fact that the patient refuses psychopharmacological treatment for his co-morbid psychiatric problems, namely the depressive mood, could augment the risk for acting-out. Possible side-effects that could cause acting-out should also be taken into consideration when choosing the immunomodulating preparations for possible future treatment of MS in this case. Both corticoids and interferon-beta have a place when treating MS. But, they both have potential neuropsychiatric side effects such as cognitive dysfunction, mood disorders, psychotic symptoms (27), irritability and tension. Another, well-documented side effect of IFN-beta is delirium as well as a slightly elevated suicide percentage (28).

To prevent these complications and the risk of impulsive and violent behavior, another type of immunomodulation treatment seems more appropriate, type glatiramer acetate or natalizumab (29, 30). Significant neuropsychiatric side effects are not found with either of these preparations (31).

However, more studies are necessary to systematically map the risk factors for violence in ASD.

Conclusion

In the exceptional case that a person with ASD is also diagnosed with MS the right immunomodulating treatment has to be selected considering the possible neuropsychiatric side effects. Further it is very important to treat psychiatric co-morbidity in patients with ASD who mention violent thoughts and/or show aggressive behavior, concerning the relation between mental health and the risk on violent acting-out. Future studies on the risk factors for aggression and violent behavior in people with ASD is thus necessary.

REFERENCES

1. Barkhof F, Filippi M, Miller DH, Scheltens P, Campi A. *et al.* Comparison of MRI criteria at first presentation to predict conversion to clinically definite multiple sclerosis. *Brain*. 1997;120:2059-2069.
2. Asperger H. Die 'autistischen psychopathen' im Kindesalter. *Arch Psychiatr Nervenkr*. 1944;117:76-136.
3. Jessurun JH, Verhagen-Redtenbacher C. Het Asperger-syndroom in de DSM-IV. *Tijdschr Psychiatr*. 1996;8.
4. Alonso Y, Miralles MC, Mulet B, Serret V. Syndrome de Asperger en la edad adulta: a proposito de un caso. *Actas esp psiquiatr*. 2007;35(5):338-341.
5. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (4th edition, text revision). Washington, APA; 2000.
6. Stewart ME, Barnard L, Pearson J, Hasan R, O'Brien G. Presentation of depression in autism and Asperger syndrome. *Autism*. 2006;10(1):103-116.
7. Wing L. Asperger's syndrome: a clinical account. *Psychol Med*. 1981;11:115-129.
8. Raja M, Azzoni A. Asperger's disorder in the emergency psychiatric setting. *Gen Hosp Psychiatry*. 2001;23:285-293.
9. Russell AJ, Mataix-Cols D, Anson M, Murphy DGM. Obsessions and compulsions in Asperger syndrome and high-functioning autism. *Br J Psychiatry*. 2005;186:525-528.
10. Bejerot S. An autistic dimension. *Autism*. 2007;11(2):101-110.
11. Tantam D. Lifelong eccentricity and social isolation. *Br J Psychiatry*. 1988;153:783-791.
12. De Koning MB, Fouwels AJ. Stoornis van Asperger of persoonlijkheidsstoornis uit het A-cluster: differentiatie diagnostiek bij een volwassen patiënt. *Tijdschr Psychiatr*. 2005;10:707-711.
13. Hurst RM, Nelson-Gray RO, Mitchell JT, Kwapil TR. The relationship of Asperger's characteristics and schizotypal personality traits in a non-clinical adult sample. *J Autism Dev Disord*. 2007;37:1711-1720.
14. Mottron L, Soulières I, Ménard E. Eléments de diagnostic différentiel clinique entre le syndrome d'Asperger et la personnalité schizoïde/paranoïaque. *Santé ment Qué*. 2007;XXXII(1):367-375.
15. Gillberg C, Billstedt E. Autism and Asperger syndrome: coexistence with other clinical disorders. *Acta Psychiatr Scand*. 2000;102:321-330.
16. Da Fonseca D, Viellard M, Fakra E, Bastard-Rosset D, Deruelle C. *et al.* Schizophrénie ou syndrome d'Asperger. *Presse med*. 2008;37:1268-1273.
17. Hansman-Wijnands MA, Hummelen JW. Differentiatie diagnostiek van psychopathie en autisme spectrum stoornissen bij volwassenen. *Tijdschr Psychiatr*. 2006;8:627-636.
18. Jones GS. Autistic spectrum disorder: diagnostic difficulties. *Prostaglandins Leukot Essent Fatty Acids*. 2000;63(1/2):33-36.
19. Baron-Cohen S. The development of a theory of mind in autism: deviance and delay? *Psychiatr Clin North Am*. 1991;14:33-51.
20. Van Der Gaag RJ. Autisme spectrum stoornissen: oorzakelijke factoren. *Tijdschr Psychiatr*. 2003;9:549-558.
21. Hill EL, Frith U. Understanding autism: insights from mind and brain. *Philos Trans R Soc Lond*. 2003;358:281-289.
22. Haskins BG, Silva JA. Asperger's disorder and criminal behavior: forensic-psychiatric considerations. *J Am Acad Psychiatry Law*. 2006;34:374-384.
23. Katz N, Zemishlany Z. Criminal responsibility in Asperger's Syndrome. *Isr J Psychiatry Relat Sci*. 2006;43(3):166-173.
24. Daems J, Vandenbosch K, Pieters G. Agressie bij het syndroom van Asperger: een literatuurbeschuwing. *Tijdschr Psychiatr*. 2003;6:341-345.
25. Allen D, Evans C, Hider A, Hawkins S, Peckett H. Offending behavior in adults with Asperger syndrome. *J Autism Dev Disord*. 2008;38:748-758.
26. Newman SS, Ghaziuddin M. Violent crime in Asperger Syndrome: the role of psychiatric comorbidity. *J Autism Dev Disord*. 2008;38:1848-1852.
27. Knuts I, D'Haenen H. Complexe psychiatrische symptomatologie als begin van multiple sclerose. *Tijdschr Psychiatr*. 2003;10:629-633.
28. Van Gool AR, Banninck M, Kruit WHJ. Psychiatrische bijwerkingen van interferon en andere cytokines: een literatuuroverzicht. *Tijdschr Psychiatr*. 1998;11:710-715.
29. Polman C, O'Connor P, Havrdova E, Hutchinson M, Kappos L. *et al.* A randomized, placebo-controlled trial of Natalizumab for relapsing multiple sclerosis. *N Engl J Med*. 2005;354(9):899-910.
30. Iaffaldano P, D'Onghia M, Trojano M. Safety profile of Tysabri: international risk management plan. *Neurol Sci*. 2009;30(S):159-162.
31. Langer-Gould A, Moses HH, Murray TJ. Strategies of managing the side effects of treatments for multiple sclerosis. *Neurology*. 2004;14(S):35-41.

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