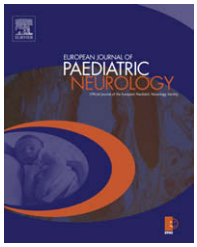
ELSEVIER

Official Journal of the European Paediatric Neurology Society



Original clinical historical contribution: Stuart Green Vignettes

Stuart Green's Vignettes 15 and 16

1. Listen to parents' observations

A highly articulate young couple came to me with a two-year-old daughter who had unfortunately slowed down in development. She had been really forward and bright until she was two years of age. She had started to become unsteady between the age of two and three, she had in-coordinated movements and had rather long, irregular eye movements. She appeared to have relatively well-preserved intellect and wasn't really unwell but had episodes of quite severe deterioration whenever she had intercurrent infection. She also had rather unusual patterns of breathing in which she sighed and then had rapid breathing and sometimes this was triggered by a noise or being disturbed or a blow of wind in the face. This pattern of progressive deterioration with a stepwise downhill pattern is characteristic of a group of conditions known as Leigh's disease in which the brain cells in the central controlling area (brain stem) through which all brain signals must pass to the body is affected and because it is intimately involved with the control of the respiratory system one gets these patterns of disordered respiration. One also has disordered eye movements because the brainstem is part of the central eye movement control. We did detect some abnormal metabolites in the urine which was suggestive of a biochemical disease but unfortunately at that time we were not able to diagnose the condition and she slightly deteriorated and then died at about the age of four. We were not able to confirm the diagnosis.

A second child was born a year later who developed quite well and grew and thrived normally without any problems.

About four years later they presented again with their third child now at the age of one year, who appeared to be a bonny girl sitting well, standing, smiling and babbling. I noticed that the parents were concerned about the possibility that she had the same condition as her late brother when to all intents and purposes she was essentially normal. I asked the mother, who was a teacher and a very good observer, what she felt was wrong with the little girl (she had been referred by her G.P. to the Child Development Centre who had found nothing wrong) and she said to me "You remember Jane's eyes? (the girl who died) Well, I think she has the same pattern of abnormal eye movements as she had". At first sight this little girl was entirely normal but if one watched her very closely one noted that the eyes went to one side, they gave an occasional flick and sometimes would do a very quick little roll upwards. There was no abnormality of posture or balance, the back of the eye appeared normal, vision was normal, the child was otherwise intelligent. In the context of the family history this was sadly the first sign of Leigh's disease which was to eventually cause this child's demise as well. In fact the major symptoms of the child's in-coordination and problems did not appear for about another six months to a year.

I think it was because the parents were very attuned to the symptoms of the first child and they knew what they were looking for that they made this unfortunately correct diagnosis despite the doctors saying the child was normal and many months before the classical symptoms appeared. Many progressive diseases are difficult to recognise because they present with minor signs of deterioration which are masked by forward development so the presentation of a child may in fact lag behind the time when the pathology first starts. However, parents who have attuned to a particular disease may notice problems very early, much earlier than a medical practitioner.

Comment

Stuart rightly emphasises the observational skills of the mother here, but he has the energy empathy humility and patience to confirm her findings, fearful though they are. At the moment that he sees these aberrant eye movements, and then sees them again, he is in that privileged but awesome state when he knows the future, and must now transmit that knowledge.

2. Asperger syndrome

We have become more aware in the last five to ten years of so-called Asperger's Syndrome, a condition akin to Autism. Whether this is a milder form on the same spectrum or related to it in a different way, opinions are divided. Both children and young adults (usually men) with Aspergers usually have reasonable language skills; average to high intelligence but have difficulties with use of language; difficulty with eye contact; difficulty with social contacts; rather mechanical approach to the use of language; sometimes pedantic; obsessional; often having difficulty with relationships with others. Sometimes these children go unrecognised at school and present when they have behavioural problems or school

failure. These children are becoming increasingly recognised as having special needs and their management is not easy.

A woman walked into my clinic recently and before I had time to say hello or sit down she brought out a pocket computer and started tapping into it. As she did so she looked up briefly and said to me ''I will tell you why I have come – it is because I am perturbed about my son because I am sure he has Aspergers syndrome''. Then she went on tapping into her computer then looked up again and said ''I have been reading about this syndrome. I have suspected it for a while because he has 11 of the 15 criteria of Aspergers syndrome according to Dr. X''. She looked down at her computer and tapped in some more things and said ''He doesn't have social graces; he is mechanically minded; somewhat obsessional; happy to play on his scooter rather than play with other children''. She then went back to her pocket computer, looked up again and said ''Yes. I have checked all these things. I have been on the Internet and I am sure that this is the diagnosis''. Meanwhile the young boy was sitting there, staring out of the window. His mother then said to me (before I had had a chance to say anything to her, let alone the boy) ''Do you think I am right. Doctor? and if so how do you think it has come about. I think it might have been due to the immunisation he had at the age of one, or possibly to a fall he had at the age of 2. Is that possible? I have read that this might be so.'' Well, before I even started talking to the boy or examining him, I had at least an idea as to where the Asperger gene had come from even though Mother had not recognised it herself. [words 435].

Comment

At the time this text was written, a decade or two ago (we do not know exactly when) child neurologists were not much involved in the field of autism which was going to see an explosion of research trying to answer some of the questions alluded to in Stuart Green's story. Interestingly, during the 2009 Ronnie MacKeith Prize lecture at the BPNA: 'Identifying clinical phenotypes in the search for autism susceptibility genes' Dr. Jeremy Parr described ongoing research to identify the relatively mild autism related personality and behavioural traits in relatives of individuals with autism spectrum disorders (ASD) – the 'Broader Autism Phenotype' (BAP).[1]

One hypothesis is that the presence of the BAP in relatives of individuals with ASD is related to the genes which have a role in the development of autism. The inclusion of BAP relatives in genetic studies may therefore assist in the search for autism susceptibility genes.[2]

REFERENCES

1. Parr JR, The International Molecular Genetic Study of Autism Consortium. Using interview and observational methods to triangulate and dimensionalise the Broader Autism Phenotype, in preparation.
2. Bailey A, Parr J. Implications of the broader phenotype for concepts of autism. *Novartis Found Symp* 2003;**251**:26–35 [discussion: 36–47, 109–11, 281–97].

Thierry Deonna*
Departement Medicochirurgical de Pediatrie, Unite de Neuropediatrie 1011, CHUV, Lausanne, Switzerland
**Corresponding author*. Tel.: +41 21 314 3563; fax: +41 21 314 3572.
E-mail address: thierry.deonna@chuv.ch

John B.P. Stephenson
Fraser of Allander Neurosciences Unit, Royal Hospital for Sick Children, Yorkhill, Glasgow, Scotland G3 8SJ, UK
Tel.: +44 141 7765589.
E-mail address: john@jbpstephenson.com

1090-3798/$ – see front matter
doi:10.1016/j.ejpn.2009.03.001