

DAEDALUS: TECHNOLOGICAL TRIUMPHS AND CHALLENGES

# Autism: Desperately seeking a cure



By **ANDY HO**  
SENIOR WRITER

**A**BOUT 80 per cent of an online support group of 560 parents here have resorted to some alternative therapy for their children's autistic condition.

These run the gamut from megadoses of vitamins C and B6 or omega-3 fatty acids to gluten-free or casein-free diets. Then there are the potentially deadly therapies, including the use of Avandia and Actos.

These are drugs for diabetes that came to market in the late 1990s. But it was only last year that they were confirmed to cause, on occasion, heart failure in the young with normal hearts. (When a drug intended for a specific ailment – say, diabetes – is prescribed for something else – say, autism – that is called an off-label use. Such use is not illegal, per se.)

Traditionally, autism was diagnosed only in children who showed a profound indifference to, a lack of empathy for and social withdrawal from other people, including parents and siblings.

In 1994, however, the American Psychiatric Association expanded its definition of autism in its Diagnostic And Statistical Manual (4th edition), or DSM-IV, to encompass a broader range of disorders. Autism is now referred to as Autism Spectrum Disorder (ASD), and includes related disabilities, such as PDD-NOS (pervasive developmental disorder, not otherwise specified).

In the DSM-IV, the psychiatrist's bible the world over, all items on the checklist for autism – including language impairments, developmental delays, sensory impairment, personality disorders and so on – are given equal weightage. However, 90 per cent of these symptoms are not specific to autism.

As is true with all other DSM-IV disorders, the diagnosis of ASD is based solely on symptoms. There is no specific laboratory test to nail it down objectively, so there might be non-autistic kids diag-

nosed with ASD. The numbers diagnosed as being autistic, not unexpectedly, rose after DSM-IV – and, in tandem, so did the demand for offbeat therapies.

Here's why: There is no known cure for autism but one therapy known to help patients is that which teaches patients to imitate their teachers. This behavioural therapy is done one-on-one for up to 40 hours a week over many years. This being an arduous process, parents naturally look for short cuts.

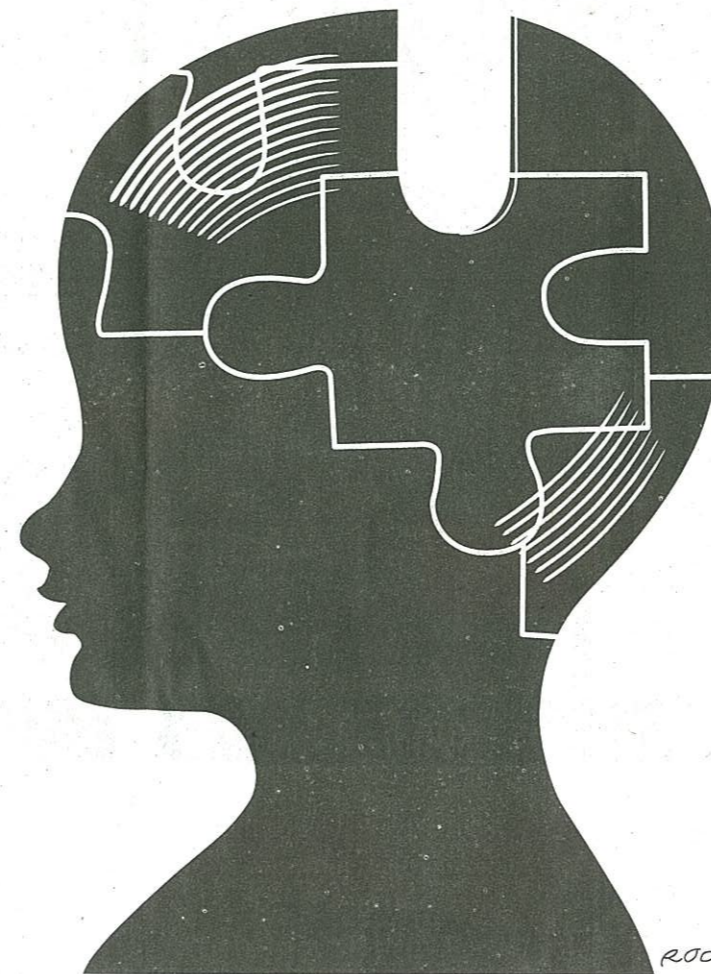
Sometimes, fad therapies seem to work because autism, like many other disorders, displays a natural pattern: Symptoms get worse at times and diminish at others. When symptoms get really bad, parents hunt for magic cures; and when the symptoms abate naturally afterwards, the improvement is attributed to the new "cure". Parents want to believe.

Moreover, fad treatments are now widely discussed on the Internet. As a result, parents who are extremely motivated to help their kids become easy prey for quacks. If parents perceive their doctors to be dismissive or dogmatic, they might even abandon mainstream treatment altogether. So the Health Ministry has rightly formed a committee of experts to review available research on and issue guidelines about alternative therapies for autism by next year so parents can choose more wisely among them.

One particular therapy the committee should review is chelation, where certain chemicals are administered orally or intravenously in the hope that they will stick to heavy metals present in the body, which are then flushed out in the urine. Advocates of this treatment say the mercury (as thimerosal) in childhood vaccines is the cause of autism, so chelation to bind mercury in the body should help.

Though approved only for acute heavy metal poisoning, there are some doctors here who administer chelating agents using in-office intravenous drips. Most doctors do not believe chelation can help in autism cases. After reviewing the world's best studies, the US Institute of Medicine concluded in 2004 that thimerosal is not a cause of autism.

Nevertheless, widespread belief in the link persists. In fact, advocacy groups are now parading a US court decision in March in which a family sued the govern-



ment, claiming that vaccines had caused their daughter's autism. The US government settled the suit after concluding the baby shots had "significantly aggravated an underlying mitochondrial disorder" which caused a brain disorder "with features of autism spectrum disorder".

When those tiny power stations in our cells called mitochondria don't function well, many normal body functions go awry – much like a factory located in an area with frequent brownouts. What the US authorities actually conceded was that the vaccines had exacerbated an underlying condition caused by sick mitochondria in the child, who then developed symptoms found in DSM-IV's long checklist for an ASD diagnosis.

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Those symptoms, it ought to be noted, can also be found in many non-ASD patients who encountered problems in their brains as the organ was developing.

Thus the child in question must have been initially diagnosed as ASD, whereas further tests revealed that she actually had a mitochondrial disorder instead. The United States Centres for Disease Control and Prevention has stated categorically that it was "a complete mischaracterisation of the findings of the (court) case, and...of the science" to say vaccines cause autism.

But as the case was settled for an undisclosed sum, court documents have been sealed. Predictably, advocates smelt a cover-up.

The Singapore committee of experts has its work cut out. Sceptics, wedded understandably to hope, will scrutinise its report very carefully. We wish it well.

andyho@sph.com.sg