

Case Histories

Delayed Development responds with gastro-intestinal intervention.

Gender, Age, Occupation, Nationality, height and weight.	J.M. is a 2 yr old boy, an only child of a young couple. Whilst he is taller and heavier than the average 2 yr old, his cognitive development has been diagnosed as delayed.
Presenting complaint – list and duration	<p>I met J.M. with his mother, and it was instantly clear that J.M. had developmental delays. He did not make eye contact for even a second and apparently never did with his mother either. He immediately sought out what was under the table and the chair and inspected every other piece of furniture, seemingly oblivious to his mother and me. He remained very active throughout the consultation and not once looked straight at me, or his mother, but knew to go to her when she called him to say that it was time to go.</p> <p>J.M. had yet to verbalise speech and made grunts only, it was this that was the most distressing from the parents' perspective. He also did not appear to understand anything that was said to him and he would not look at a book, for example. However, he did like to inspect his environment, making much more contact with inanimate objects than people. He also had temper tantrums; these started about 6 months previously.</p> <p>He was normal physically, but had been diagnosed with Developmental Delay Disorder (DDD) by the relevant physicians.</p> <p>The mother's pregnancy had been unremarkable. His mother had required a relaxant drug during delivery, as he was a heavy baby at 9 lbs 3 oz. He was breast fed. He made eye contact at this time, and appeared 'normal'.</p> <p>At 2 months, he had his first respiratory infection and was prescribed antibiotics. Over the next year, he was prescribed 3 more courses for 3 more upper respiratory tract infections. When he progressed on to solid foods, he vomited when he ate certain foods. He was tested for allergies and he was positive to egg, chicken, penicillin and tree pollen. He had not consumed any of these since this time. <i>Exposure to more than 2 courses of antibiotics in the first year of life is associated with a significantly increased rate of food allergy, according to research at the American Academy of Allergy, Asthma & Immunology 2013 Annual Meeting.</i></p> <p>He was also diagnosed anaemic and was given iron in liquid supplement form from the age of 1, for 8 months. Before he was 1 year of age, he was also diagnosed with mild bronchial asthma, but he did not have the need for a 'puffer' – which he would not have had the coordination to use. It was believed this was a mild allergy to something, which was in character with his already identified existing allergies, one of which was an inhalant allergy.</p> <p>In the previous 6 months, he had needed another course of antibiotics, for another chest infection. Each time he had taken antibiotics, it seemed as if another light went out in his head, his mother explained. He had stopped making any eye contact after about 8 months of age. She was very distressed by this but did not know what else to do.</p> <p>J.M.'s digestive system had also been compromised after the antibiotics, his mother explained his stools came out in small balls like large rabbit droppings, lots of</p>

Any Investigations

malodorous wind and bloating. This had persisted for over a year.

At the same time, he also developed muscle tensions in his body. It was as if he were deliberately tensing his arms and body in a parody of a 'most muscular' pose. His body had become progressively tense and more so if his Mum or Dad wanted to cuddle him. At night, when he was sleeping he would go through phases of being tense in his body and then relaxing. Due to this, especially when he just had a T-shirt & shorts on in the summer, his body did look different to others since he had rigid arms and sometimes legs.

His diet was quite simple and repetitive, with cooked oat porridge for breakfast topped with apple puree, and tomato sauce pasta with sausage for lunch, fish fingers and ketchup or spaghetti bolognaise for dinner. Like many young children he ate a narrow range of vegetables willingly, which were carrots, cucumber, tomatoes, Chinese corn & sweetcorn. Whilst this is not the best diet, it is free of refined sugars, artificial colours, trans fats (except the sausages perhaps), biscuits and cakes.

After his diagnosis, it was possible to access educational support, which helped his mother to get to know what it typically meant for a family with a child with DDD.

J.M.'s parents has asked the doctor repeatedly if there was anything more that they could be doing and they were told that it was a genetic condition that could not be changed, but that they should engage in all of the support networks that existed. Although the parents were not 'into health' before J.M. was born, they both felt that the antibiotics had a role to play in the changes that had occurred within him. So they had looked on the internet and discovered a whole world of conversations with people in the UK, Europe and particularly in the USA. It was from this lead that they sought the help of a Nutritional Therapist. They had also heard of some biochemical tests that they were interested in running too.

We discussed biochemical & functional testing which is one of the reasons they had come in to see me. We agreed that a Comprehensive Parasitology test which assessed for expected and beneficial bacteria, commensal (imbalanced) flora, dysbiotic flora and parasites and yeast would be the best test to start with.

There was also a strong inhibitory factor of the cost of investigations, otherwise the CDSA + CP test may have been more useful. They were very surprised about the test costs, and were puzzled why they were not available from the GP or NHS. I explained to them the reasons why and re-emphasised the difference between pathology testing and NHS services and a functional medicine approach with private fees and costs. I had this conversation with them on a number of occasions in a variety of forms. On at least one level, I do not believe that it all sank in with them, as repeated future conversations repeated the same perspective.

We also discussed organic acid, amino acid and fatty acids and nutrient testing, but I recommended that this wait until after addressing the digestive imbalances.

The results of the test were awaited before any recommendations were made. The Comprehensive Parasitology test results showed the following:

- Presence of Clostridium species & Enterobacter cloacae.
- Lack of sufficient levels of Lactobacillus species.
- Presence of some carbohydrates in the stool.
- Presence of some yeast in the stool.
- Too acidic a pH.

- Lack of propionic acid, a beneficial short chain fatty acid.

The parents intended to show the results to their GP and ask his opinion about what to do with these results. Finally, they did do this but only after they had seen benefits in their son, and they reported that the GP had dismissed the results entirely and suggested they repeat a stool test via the NHS, and the GP warned the parents of 'wasting money' on unproven approaches to their son's condition. I believe that had this occurred prior to the evidence of improvement, that they would not have implemented the nutrition programme at all. In fact, when I put this to them, the parents agreed. Now that they had experienced the evidence, they believed in it. I was careful not to criticise the GP, abiding by my code of professional ethics, but I was nonetheless surprised that they still seemed to trust so highly what the GP said in regard to this area. My goal, as I reiterated to the parents, was to support J.M.'s health in the best way, from an entirely complementary and NOT alternative approach.

Strategy

The strategy was quite simple in the first instance, and that was to correct the imbalances identified in the stool test and at the same time to support J.M.'s nervous system with the vital phospholipids from which it is made. The hope was that there would be a definitive improvement in not only his digestive symptoms but also his cognitive function, speech & rigid body before, and then further testing could be conducted from that point.

Diet & Supplements: name and dose

In terms of the diet, the [stewed apple recipe](#) was recommended to J.M. with the accompanying information of how it helps the mucosal immune system and gut. A wider variety of foods was suggested, and we discussed alternative meal suggestions. The boy's mother appreciated the increased list but stated that it was quite challenging for her boy to eat new things and that this was a process. We understood that it may take a little time before his diet could be expanded.

Here is the first supplement programme that was recommended for J.M.

Supplement & brand	Dose
S. Boulardii (ARG)	½ cap with breakfast & dinner
Lactobacillus GG (ARG)	½ cap with breakfast & dinner
Gluten-Gest (ARG)	½ cap added to lunch & dinner
ATP Lipids Powder (ARG)	½ of the scoop at breakfast
Bio-B 100 (BRC)	1 with breakfast

After five weeks, the programme was changed slightly to introduce a variety of probiotics, and an increase in the B vitamin dose.

The second supplement programme was this:

Supplement & brand	Dose
S. Boulardii (ARG)	½ cap with breakfast & dinner
Lactobacillus P,R,S (ARG)	½ - ¾ cap with breakfast & dinner

Gluten-Gest (ARG)	½ cap added to lunch & dinner
ATP Lipids Powder (ARG)	½ of the scoop at breakfast & dinner
Bio-B 100 (BRC)	1 with breakfast & lunch

At the third appointment, eight weeks after the second, the programme was changed to this:

Supplement & brand	Dose
S. Boulardii (ARG)	1 caps with dinner
Lactobacillus P,R,S (ARG) Rotated with Lactobacillus GG (ARG) when the pots run out	½ - ¾ cap with breakfast & dinner
Gluten-Gest (ARG)	½ - ¾ cap added to dinner
ATP Lipids Powder (ARG)	Build up to 1 scoop at breakfast & dinner
Bio-B 100 (BRC)	1 with breakfast & lunch
Aqueous Multi-Plus (BRC)	1 tablespoon with breakfast

S. Boulardii (ARG)

The well-known probiotic yeast that supports SIgA levels, and can also reduce inflammation, and is the choice probiotic to counter clostridium species. Pull apart capsules make this suitable for an infant or child.

Lactobacillus GG (ARG)

The world's most researched probiotic bacteria, with a potential wide range of digestive and other benefits, including the reduction of inflammatory cytokines that could result in upsetting the balance of neurotransmitters. Contains at least 30 billion viable organisms per capsule. Further indicated by history antibiotics. Pull apart capsules make this suitable for an infant or child.

Gluten-Gest (ARG) (vegicaps)

This vegetarian enzyme formula provides broad-spectrum enzymes for protein & carbohydrates in particular. Its name is somewhat of a misnomer because it does not help individuals with a sensitivity to gluten be able to tolerate gluten. It does help those individuals who are avoiding gluten to improve their digestion, and it is suitable for most others for this purpose too. It comes in capsules that can be pulsed apart making is suitable for small children and infants.

ATP Lipids Powder (ARG)

This powder provides proprietary phosphoglycolipids researched and blended to optimise cellular uptake and membrane utilisation. Supports the structural vitality of cellular and mitochondrial membranes, including normal membrane permeability and potential and ATP energy production.

Bio-B 100 (BRC)

This is a low dose B vitamin supplement, providing active B vitamins for B1, B2 and B6. It is also a small tablet which allows for relatively easy grinding into a powder or concealing in food. B vitamins are so important for the nervous system and energy.

Lactobacillus P,R, S (ARG)

A probiotic formula with the 3 hardy strains, one of which in particular has an affinity for the stomach, and all of which support immunity either directly or indirectly.

Aqueous Multi-Plus (BRC)

A sweet-tasting liquid multi vit & min formula that provides reasonable levels of nutrients for a liquid multi, including 15 mg of zinc and 50 mcg of chromium.

Duration

J.M.'s parents ensured that he took the supplements as directed, and he has stewed apple 3 or 4 times a week. Three weeks later, I spoke with the mother as arranged. Two weeks after that we met for the second time, mother and son this time. We reviewed the progress that the young child had made and then we met after another five weeks, again with a call in between appointments. Eight weeks after the second appointment, we met for the third time, mother and son. Since that time, his mother has kept in touch by email on a number of occasions, and we have had one telephone conversation.

Outcome

J.M. had a very swift improvement in his bowels. The large rabbit droppings changed to well formed stools and his bloating subsided and his smelly wind also reduced by the day. This all occurred within the first week. His energy improved, particularly in the morning. He could be hyper-active and then lethargic and whilst hyper-active he would often be still at moments and tense his muscles. His mother said it would be quite funny if it were done on purpose but as it was a clear reflection of something within his body not working correctly, this made her sad – as well as determined to do something about it. She and her husband had not accepted their GP's view that it was all part of the condition and they needed to accept it and learn to live with it, and yet at the same time felt obliged to seek his opinion on all matters relating to his care. This is useful on the one hand in terms of primary physician care being firmly on the shoulders of the appropriate doctor as opposed to a complementary therapist, but on the other hand, the information provided was of very limited benefit in J.M.'s condition.

With the improvement in his energy in the morning, so there was a reduction in the frequency of his muscle & limb tension moments. This was the most evident outward sign that the nutritional input was making a difference, and within 2 weeks J.M. had reduced these moments by about 50%. This improvement tended to wane after lunch, however, which prompted me to increase the B vitamin to one with lunch as well. He managed to swallow these down when it was inserted into a mouthful of food.

So, five weeks in and J.M.s digestive system was improved and his energy and rigid body was also noticeably improved. There were no other signs of improvement.

When we met again, after another period of five weeks, and I could tell the difference in J.M. because he was not nearly so frenetic and he did not display the rigid body moments at all.

I already knew from an email what I was going to be told, because J.M. had uttered his first words during this period of time and he had said "Mummy" too, which brought his mother close to tears, with happiness. He had found a few words and was repeating them over and over, but every day he was speaking new words which suggested that he had learned and known the words all along but had been unable to make them verbal. He also appeared to understand his mother and father better than before, which was particularly indicated by the way he turned his head when they spoke to him, as if he was listening in a different way.

He was humming to himself as well throughout the appointment, and he had definitely developed an ear for music which he never had before. He was still not making any eye contact, however. His bowels were still fine, with no bloating and no bad smells. He had been slowly expanding his food variety. His afternoon energy was also improved, and we wondered if this was due to the additional B vitamin. In certain patients, I do find that the active form B vitamins really can make a difference, and although there is no comparison with the usual inactive form of B vitamins, I believed that the active form was the ideal form for him. I also increased the phospholipids, NT Factor powder to twice daily.

It is best in sensitive cases to increase the ATP NT Factor powder gradually because it can lead to a temporary increase in systemic inflammation. Here is what can happen: restoration of mitochondrial membranes facilitates increased 'resting potential' and associated cellular efflux pump capacity to exclude damage associated microbial particulates (DAMPs) which prevents inappropriate autophagy but increases alarmins. Alarmins are endogenous components of human biology including mtDNA, Uric Acid and ATP. In the short term, increased delivery of alarmins may activate embedded innate receptors which in turn stimulate the release of inflammasomes (protein complexes that drive NF-kB), producing transient local and systemic inflammation and associated symptoms.

As discussed in an email with his mother before this visit, the supplements were stopped for a short period of time to see what a difference they made. This was because it was challenging for the parents to afford the supplements and in spite of the benefits, they were wondering if they had corrected something and the benefits would persist without them needing to be taken. This belief was derived from their own perspective and did not fit with the conversations and explanations given to them at each appointment. They told me that they could not afford to keep on with such a programme, and with perhaps an uncharacteristic biting of my tongue, I did not respond other than to say that it must be hard to balance the cost of all things in life. My immediate opinion, in my mind, was that anything that could positively influence their little boy's health was definitely affordable above all else. This was a lesson of not projecting my own opinion onto others, and not making judgements on their behalf, or spending their money for them.

At the same time, I recognised that we had yet to introduce an anti-microbial to specifically address the *Enterobacter cloacae* bacterium, which I discussed with the parents. However, they did not perceive this bacterium as an issue really since the GP had told them it was not important, but I reiterated that it may require addressing at some stage, or a repeat test would be needed to confirm its presence again. This would require a cessation of supplements for at least a week, and this was not desirable. Since there had been progress with the first supplement programme and because I was aware that there may be some negative effects of directly targeting the unwelcome bacteria, I maintained an almost identical programme for the second phase. This was at least in part because I felt that if there were negative effects then this would feed back to the GP with resultant recommendation to withdraw from the nutritional support, and this would be deleterious to J.M.

After 3 days without the supplements J.M.'s bowels became worse, rabbit droppings resumed and wind started up again and it was smelly too. His body rigidity came back fast and his more balanced energy and more calmed had disappeared by the 3rd day without the supplements. On the 4th day the supplements were re-started and within 3 days of taking them again all of the benefits returned in their entirety; this was quite a swift return to a state of health that had taken about 10 weeks to get to. This included improved energy in the afternoon, virtually no rigid body moments, improved listening abilities and a return of some speaking. His mother reported two instances

where she was sure that he was looking at her directly in the eyes, which had not happened since he was 8 months old.

Rather than pursue the anti-microbial route, I decided to introduce a multi nutrient in liquid form, to help ensure that J.M. had more of a guarantee that he had sufficient levels of key nutrients especially zinc.

The feedback since J.M. commenced the third was received by email and telephone. He has continued to fare well, and is able to sit still and engage in tasks such as complete simple puzzles (designed for toddlers) which is another first. He has moved on from single words and can now string two or three together in a meaningful way. The occupational therapist is very pleased with his progress and “confided” in them that she thinks it must be the nutritional programme that is working.

His rigid body moments only occur when he is clearly distressed about something. His temper tantrums are now rare. He is more responsive to his Mum and Dad and to those who have a role in caring for him. He says ‘Mummy’ every day. He looks at people now, but only makes some eye contact with his Mum and not so much with his Dad. He is less fussy with the foods he eats and has managed to expand his dietary intake without complaint.

As his mother says, the nutrition programme has helped to switch some of her darling boy’s lights back on.

Their financial resources are stretched to provide this monthly support, and they are considering, with my help, conducting another test such as an organic acid test or amino acid test. They keep on with the sound diet and nutritional supplements, and hope that he can become fully conversant and reach a norm for his age group within a year or more.

Comments

It has been hugely rewarding to see the little lad, J.M., change from a speedy, hyper-active kid who makes no eye contact, does not speak a word, does not appear to hear anything that is said to him and who may from time to time tense his arms and legs and look like a frozen robot to a boy who can sit for a period of time playing, appreciate that he is being spoken to and understand what is being said and speak back and make eye contact with the most significant person in his life. All this has occurred in a few months of his short life and as happened because of nutritional intervention, against the odds and against the prognosis.

There is no doubt some way to go, but it has lifted the despair of his mother, and given hope to both parents.

There is a long way to go in their appreciation of how the human body works and the nature of the imbalances within their son (and I am sure I don’t know the full details either). Equally, there is some distance between their understanding of the role of an NT who is aiming at optimising the biochemistry of their son, vs the role of the GP or medical doctor in ‘treating’ their son for the condition. They believed that doctors would correct the underlying causes of the condition and now realise that this is not the case, but do not fully grasp why.

So, there have been intellectual challenges in the process of helping this boy, financial challenges faced by the parents, and ‘political’ challenges too. I am aware that it seems that the programme is progressively palliative and there is a natural unwillingness to radically change the programme in all concerned. However, what is undeniable is the evidence in front of their eyes on a daily basis; J.M. is a very different

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boy to what he was, and his future is even more different than it might have been. I look forward for further improvements in his cognitive function.

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