

JONATHAN TOMMEY REPORTS

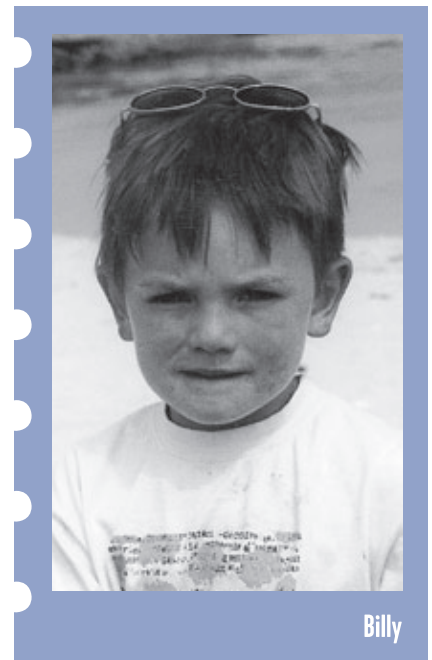


As I sit here in my kitchen I am, as on many occasions, looking at Billy imaginatively playing on the floor. This time with a kitchen mop used as a train, sliding under chairs as tunnels and making puffing noises simulating the train sliding down the tracks.

We have just returned from a fantastic two weeks holiday in Tresco in the Isles of Scilly. Billy had a fabulous holiday as we all did. Tresco is a very tranquil and picturesque island full of friendly islanders who have grown aware and accustomed to Billy and his sensitivities. This is now our seventh consecutive year on the island – we have fallen in love with it. This year saw Billy experiencing true freedom and independence. Bikes were hired for the whole family which enabled us all to spend hours freely cycling around the island without the hazards of London streets, no cars, lorries, motorbikes and vans, only the occasional golf buggy (set aside for the elderly and disabled) and the tractors delivering and collecting people and goods, as they do. We are fortunate that Billy is very aware of danger and when he would hear a tractor coming would dismount his cycle and wait patiently on the side of the road until it had passed. He would then jump back on and

fresh air and oxygen

frantically try to catch up with it again. We 'lost' him on two occasions when he felt confident enough to go on explorations by himself. I would, of course, be manically cycling as fast as I could around the island looking for him. When I did eventually find him, red faced and sweating he would look up at me innocently and say 'Hi, Daddy' as if to say what are you panicking about. One islander found him on tour with a puppy from the Abbey. He had lifted the puppy over the garden wall onto a favourite stretch of road and was found crying as he could not get his bike over the wall, hardly surprising as it was four feet high. We had great fun, with fantastic, sunny weather, turquoise waters, fresh sea air and no pollution. Billy had found his island paradise once again. Helicopters took us from the mainland and brought us back again, what a great start and finish to a superb holiday. The holiday however was wasn't without incident. Toby split his head open which resulted in a life boat racing us both to the neighbouring island for a hospital visit and Billy with a chronic tooth abscess which resulted in antibiotics to bring the swelling down. (Billy's face was unbelievable, elephantiasis in the nth degree.) Of course we saw this as an ideal opportunity to increase his probiotic supplementation as his gut flora would again be disturbed. Antibiotics and a



Billy

relaxing holiday suited Billy very well, a panacea – we saw lots of gains and overall attention and general health improvement was the end result. Arriving back to the usual mail that haunts us all (bills) and the stress of returning back to work and putting the children back into school made us feel like taking a massive U turn back to the Scillies, but life must go on I suppose.

Anyway, I was eagerly awaiting a letter from Billy's doctor with of tests that I had requested to be conducted with the kind support of the NHS. Of course I was again disappointed that they had only agreed to complete some of the tests and did not see the 'relevance' of looking at his inflammatory cytokine levels. Doc has



obviously not read the last issue of the *The Autism File* in which I wrote an article entitled 'Is Autism An Inflammatory Disease?' It looks as though I shall have to go privately yet again for those tests. It is no wonder we are all highly stressed as the majority of health professionals do not seem to understand or have the inclination to help us with our children. It seems we have a long way to go in educating the doctors who are supposed to be there for us and 'grey literature' is not sufficient evidence for them to look into beneficial treatments for autistics. With limited new funds for future research to provide peer reviewed papers just how long will we have to wait. Time is of the essence to us, we cannot afford to wait, we have to be reactive to present abnormalities and deficiencies found and proactive in searching for new clues, new research and new theories. I am

hoping that the 'Inflammatory' scenario is one that will shed a new light into testing protocols and I for one am very excited to get the tests completed and results back for Billy, if only to prove to myself that I am on the right track.

Recently Billy was fortunate to have a consultation with Dr Ali of the Integrated Medical Centre in New Cavendish Street. He raised a completely new theory to me. A theory that involved compression in the upper neck, sufficient enough to disturb the cerebral blood flow to the brain of autistic children. He asked whether Billy had a long birth and was there a possibility of him being delayed in the birth canal? This was certainly plausible in Billy's case. He has always been extremely sensitive to touch around the neck area and therefore osteopathy and manipulation have been recommended. If there is a reduced blood flow then, as Dr

Ali said, the unconscious area of the brain which has control over hormones, the digestive tract, the immune system and neurotransmitters etc would not function as it should and this obviously needs to be addressed. I am having the manipulation conducted on myself first so I can gently manipulate Billy at night with juniper massage oils. I did ask him if the ongoing inflammatory mechanisms in our children can cause Ischemia and increased coagulation? Is this coagulation and the inflamed cervical lymph tissue in the neck (due to passive infection) the reason for cerebral blood starvation and the neck discomfort or is it a combination of all three?

This point of oxygen and nutrient starvation in autistics (due to ischaemia and possible cerebral blood flow reduction), was reinforced recently when Billy had a tooth extracted. He was given lots of oxygen when he came out of anaesthetic and the ensuing conversation he had with Polly was amazing – fluently stringing together five sentences – something he would not have done before!

Was this increased speech due to the effect of the anaesthetic or the increased oxygen uptake in the blood? I would go for the latter. Oxygen therapy has been of benefit to autistics and so has heat treatment, eg, sauna and strenuous exercise, both of which increase oxygen uptake in the blood and increase dilation of the blood vessels – more food for thought. Yet again it does fit the theory.

Whatever the causes for autism, treatments need to be found. If you are finding success with any methods please let me know. Billy means the world to me and I will never give up on him, he is an inspiration and seeing the way he is improving gives me increased motivation and commitment.

I shall not fail him.

Good luck with all of your endeavours.



the role of cytokines and autism

Autism, as I described in Issue 7 of *The Autism File*, is an inflammatory disease (see flow diagram on page 7). Most dysfunctioning in autistics is in some way related to the inflammatory processes initiated by an allergenic or pathogenic overload to the immune system. Parents inform me that their children get worse during illness, after eating allergenic foodstuffs or being exposed to certain chemicals. Pathogens, in the form of bacteria and viruses and undigested proteins in foods, pass into the bloodstream and initiate an immune response from the body. The immune cells of the body, namely macrophages, T-cells, natural killer cells and, lymphocytes release chemical messengers which communicate and orchestrate immune response to the pathogen. These are principally cytokines. Cytokines are small glycopeptides that adhere to surface receptors on cells of the host and the pathogen.

Cytokines have several important characteristics:

- 1 The same cytokine can be produced by a number of different cells.
- 2 The same cytokine may have different effects in different circumstances (pleiotropy).
- 3 Different cytokines may have the same activity depending on the situation (redundancy).
- 4 Cytokines often act together and increase the effects of one another (synergy) but may also act as antagonists.
- 5 They are either paracrine (acting upon cells close to them) or autocrine (acting on themselves to produce more) and rarely act in an endocrine manner.
- 6 They act with high affinity cell surface receptors (distinct for each type or even sub-type) and then regulate the transcription of a number of cellular genes.

Cytokines are synthesised, stored and transported by various cell types not only inside the immune system but also by other cells. Their central role is to control the direction, amplitude and duration of immune responses and the modelling of tissues. Cytokines are very potent and their activities are tightly regulated by inhibitory proteins, soluble binding factors and specific auto-antibodies. If this mechanism is disturbed then inflammatory, infectious, autoimmune and malignant diseases will be the end result.

There are two main groups of cytokines, pro-inflammatory and anti-inflammatory. Pro-inflammatory cytokines are produced predominantly by activated macrophages, ie, the pathogen is present and is involved in the upregulation of inflammatory reactions. Anti-inflammatory cytokines belong to the T-cell derived cytokines that are involved in the down regulation of inflammatory reactions. Pro-inflammatory cytokines are predominantly Interlukin-1, Interlukin-6, Tumor Necrosis Factor-alpha, Interferon alpha and interferon beta. The anti-inflammatory cytokines are Interlukin-4, Interlukin-10 and Interlukin-13 which have the ability to suppress the production of proinflammatory cytokines. Therefore anti-inflammatory cytokine therapy may in the future lead to the management of inflammatory diseases such as inflammatory bowel disease, rheumatoid arthritis, psoriasis, type 1 diabetes – and as I see it, autism.

Cytokines also play a very important role in the activation or suppression of our immune cells. For example Interlukin-10, an anti-inflammatory cytokine produced by T-helper cell 2 (Th2), will inhibit T-helper cell 1 (Th1) cytokine production such as interferon-gamma which will have the knock-on effect of not eradicating pathogens from the body. Interlukin-12 stimulates T-cell and natural killer cells. It is secreted by antigen.