



October 2010
Ataxia UK Annual Conference
DOCTORS' QUESTIONS & ANSWERS

Dr Paola Giunti, Consultant Neurologist at the Accredited Ataxia Centre of Excellence in London, Dr Peter Baxter, Consultant Paediatric Neurologist at the Ryegate Centre at the Sheffield Children's Hospital and Dr Elizabeth Harrison, retired General Practitioner and Chair of Trustees for Ataxia UK, formed the Doctors' Panel. Questions were received in advance as well as from the floor. The session was chaired by Professor Barry Hunt, Trustee of Ataxia UK and Chair of the Scientific Advisory Committee.

DIAGNOSIS OF ATAXIA

Question 1: Is there any known family link between ataxia, epilepsy, migraine, and muscular dystrophy?

Dr Giunti: Yes, there is a link between episodic ataxia, epilepsy, and migraine. People with episodic ataxia type 2 (EA2) can have epilepsy and migraine because these can be caused by mutations in the same gene. There is no link between this and muscular dystrophy. If muscular dystrophy is present in the family too, that is a very rare occasion. Possibly, two genetic conditions are running in the same family

CAUSES OF ATAXIA

Question 2: Can exposure to chemicals be a cause of, or exacerbate, ataxia? Particularly the chemicals Vienna lime and trichloroethylene, to which I have had years of exposure when I worked in the brass industry.

Dr Giunti: Yes, trichloroethylene is known to provoke what you call encephalopathy in the brain. This is global mal-functioning of the brain that usually causes nausea, dizziness and malaise, as well as in-coordination and temporary ataxia. However, in terms of chronic exposure to this chemical, [which is what we are talking about in this situation], there is no evidence that this could cause progressive ataxia.

Trichloroethylene has been used for polishing military weapons, and some people who have

returned from military service seem to develop Parkinsonism and amyotrophic lateral sclerosis [a common form of motor neurone disease]. However, there is little evidence that it causes progressive cerebellar ataxia.

SYMPTOMS AND THEIR MANAGEMENT

Question 3: I am 43 years old with late onset of Friedreich's ataxia. Can long-term stress make the symptoms of ataxia worse?

Dr Harrison: Everyone with ataxia knows that it makes people tired, but it is possible to work around the fatigue. My daughter has Friedreich's ataxia but leads a very busy life. When she's going to do something tiring, she plans ahead and gives herself an easy day before the busy one. Planning things in this way and postponing events means gives her time to recover afterwards. It's a question of working around the lack of energy.

Dr Giunti: Stress can certainly make ataxia or, as Liz was saying, fatigue, worse. However, there's little evidence to suggest that stress actually speeds up progression of ataxia.

Generally, people's attitude towards stress can influence how it affects them and if stress is significant in your life and it is becoming difficult to cope with, it's important to address this. Something that might help is cognition and behavioural therapy, CBT, which seems to be very helpful in people who have anxiety. Seeing a psychologist can also be helpful. These are two ways in which stress can be managed.

Dr Baxter: If someone is acutely stressed, it can make symptoms worse; that applies to ataxia, but also many other conditions, eg migraine. So yes, it is possible that stress could affect some of the symptoms of ataxia.

Question 4: I suffer badly from low blood pressure, especially in the morning, when I feel light-headed and can become unsteady and fall without warning. I've just come back from a holiday, where my morning light-headedness had gone, and I noticed I was able to walk further. I ate a very good three-course breakfast each morning. Could eating a big breakfast make any difference to blood pressure problems? (It was quite a stressful holiday, so being relaxed and stress free can be ruled out. I watch my weight, but always eat breakfast.)

Dr Giunti: It is difficult to comment, but we know there is no link between cerebellar ataxia and hypotension (low blood pressure). One thing that crossed my mind is that these symptoms can be seen in another condition called multiple systems atrophy (MSA). MSA begins with cerebellar ataxia, but as it progresses low blood pressure on standing up (orthostatic hypotension) is seen and this can be serious. Sometimes it may happen in an episode, stop and then reoccur later on and become worse.

Dr Harrison: Another, less serious, thing that this might be is a common condition called benign positional hypotension. This is when you stand up after lying flat and your blood pressure drops, meaning you can feel faint. If you've been lying flat all night, that might be the cause of light-headedness in the morning.

Question 5: I'm a full time wheelchair user with FA and one of the worst things is poor circulation in my legs, resulting in cold legs and feet. Four weeks ago I gave birth and was given a six-week course of Clexane to stop clotting. I'm currently having Clexane injections in my legs daily, but only have two more weeks left, and am not looking forward to the extremely cold legs and feet and discoloured legs. I also found that wearing DVT tights during labour was very effective.

Dr Giunti: It is not proven that Clexane can result in improvements in cold leg symptoms in people with ataxia. I have quite a few patients on warfarin, another drug that thins the blood and improves circulation, but this has not caused improvements in their cold leg symptoms.

Dr Harrison: It is common in people with ataxia, but especially in people with FA, to have cold, sometimes discoloured legs. I think it is likely that the stockings are keeping your legs warmer.

When you're pregnant, your heart works harder because the blood needs to circulate around your baby's body in addition to yours; this is called hyper dynamic circulation. Being pregnant is a big stress on a fit heart, so you need to be aware of heart complications if you are pregnant and have a vulnerable heart. One other thing to note is that it's normal to have much better circulation and feel warmer when you're pregnant and that may be the answer to this question.

Question 6: A few months ago I experienced some swallowing problems; is this something you see in people with ataxia?

Dr Giunti: Swallowing problems are very common in cerebellar ataxia. They are usually seen in mid to late stages, and can depend on the type of ataxia you have. Seeing a speech and language therapist is recommended; they will work with you to establish strategies to help cope with the symptoms. In-coordination in swallowing can obviously be a problem, but small changes, such as slowing the speed of eating or tucking your chin down, can make a difference. If the symptoms continue to worsen, you can change the type of food you eat; usually crumbly or dry foods are most difficult to deal with and softer food is much easier. It is important to put these strategies in place early on to avoid recurring chest infections. Any sort of recurring infection in general makes ataxia much worse, so it is very important to address these symptoms early on.

Dr Harrison: Chest infections can be caused by food or liquid going down the wrong way and this can happen if you choke. However, a speech and language therapist teaches you to swallow in a way that avoids this.

Question 7: Can ataxia induce panic attacks?

Dr Giunti: In general, ataxia doesn't produce panic attacks. Panic attacks are more to do with anxiety. If this is a symptom that is affecting you then it needs to be addressed, by something like cognitive and behavioural therapy or by seeing a psychologist.

Dr Harrison: If you have difficulty swallowing you are more vulnerable to choking. This can be a scary thing, so in that way it is possible that choking could lead to a panic attack. Seeing a speech and language therapist will help you with not choking in the first place.

TREATMENT

Question 8: My son has been on Coenzyme Q10 (CoQ10) for the last ten years. As he was very young when he started taking it (five years old), I could not find a recommended dose and made it up as we went along. He has been fine on it, but I know that idebenone is supposed to work more with the heart and at 15 his heart is now slightly enlarged. Should he be taking idebenone or CoQ10?

Dr Giunti: A large European multi-centre, one year trial of idebenone was recently completed. Unfortunately, the results did not show statistically significant improvements in neurological or cardiac symptoms. So at the moment, we can say that there is no conclusive evidence that taking idebenone is beneficial for the heart. [Ed. For more information on this trial see *Ataxian* 171.]

We are carrying on with an extension study of idebenone for another two years. Unfortunately, due to financial constraints cardiac symptoms will not be assessed in this part of the trial. However, at the London centre we want to monitor this ourselves with an echocardiogram. At the moment the only thing we know is that idebenone passes the blood-brain barrier, so it should in theory be better than CoQ10 for the neurological symptoms.

Dr Baxter: I have nothing to add to that; I agree.

Dr Harrison: You could stop the CoQ10, and see what he's like without it, without it doing him much harm. I can't remember what dose my daughter with FA takes, but she titrates it according to what she feels she needs. She finds it really helps with her speech.

Dr Hunt: CoQ10 is much more readily available than idebenone, so it's easier to buy various doses. As Liz said it is a bit like trial and error, to see what works for you.

Question 9: I have been given some information through a friend about a treatment called Propax NT. It is a supplement which I am told helps with chronic fatigue syndrome. Might it be helpful to someone with ataxia?

Dr Giunti: As with all non-drugs, it is difficult to say what the benefits are. All the trials with Propax NT are open label [a type of trial where everyone is knowingly taking the treatment], and they seem to find improvements, generally in fatigue. There is no specific report in the literature about the use of Propax NT in ataxia and I would always recommend discussing with a neurologist before taking anything. Ataxia is a symptom and it can have many different causes, so I would recommend considering this on a case by case basis, and making a decision based on the individual circumstances.

Dr Baxter: There is no evidence saying either that it can or can't improve ataxia, and this is true for a number of similar substances.

Dr Harrison: Propax NT is a multivitamin and there is a lot of it available on the internet. I think it's being pushed very heavily, which may be why somebody was told about it. With vitamin supplements, it is important to always take them according to what is recommended on the packet, and preferably to take some medical advice too, especially if you are on other medications. It is possible to overdose on some vitamins, so you need to be careful.

Dr Giunti: The other thing to consider is what the supplement is taken for. Information on the internet suggests that this compound can be used in a number of situations; for chronic fatigue syndrome, anti-aging and mitochondrial function disorders. These things are very

different, so I would be cautious about its claims.

Question 10: A couple of years ago, after visiting the Essential Health Clinic in Glasgow, low dose Naltrexone (LDN) was recommended to me. I took this for around three months, and found no difference, so stopped taking it (around this time I was also instructed to come off it by my neurologist). I reluctantly went back on it when some members of my family stated that my speech was better when I was on it. However, after another few months I felt no difference whatsoever. Please can you give an opinion?

Dr Baxter: Unfortunately there is not any evidence one way or the other. LDN has been tried in multiple sclerosis in two trials that were published last year, one of which said it did help and one of which said it didn't, but we're not aware of it being used in anyone with ataxia. This makes it very hard to give any clear advice. There is no good evidence for or against using it.

Dr Giunti: The rationale was that a low dose of naltrexone (lower than the doses that have been used in anaesthesia) is meant to be anti-inflammatory. This could help with MS, but we know that other conditions, like ataxia, are mainly neurodegenerative and at the moment there is very little evidence that there is an inflammatory component to cerebellar ataxia. At this stage, therefore, no trials have been done with LDN in ataxia and therefore it cannot be recommended.

Question 11: I'm interested in the breakthroughs in stem cell research. Could you tell me more about what is happening and the possibilities for patients in this country?

Dr Giunti: At the moment there is much research being done into stem cells, however there is still a great deal more to do before using them in clinical practice. At the moment we know that there are some stem cell centres, eg in China, in Rotterdam, where people can go to receive stem cell treatments. However, these treatments have not been validated; there has not been a proper assessment of the transplantations and none of the centres have

published in a peer-reviewed journal. Therefore I would be very cautious at the moment about these places. There is lots of research being done and it is exciting and important, but it's still research; it's still early stages for treatment.

Dr Baxter: I agree completely. I also agree that some people are selling stem cell treatments when they shouldn't be, and misleading families and patients.

Dr Harrison: The problem with stem cells is that it's a theoretical potential at the moment. Although it seems obvious that they should work therapeutically, the fact is that we do not yet know this for sure and that is why it's important that other strands of research are also going on. We are a long way away from it being a real form of treatment, but Ataxia UK is supporting stem cell research and is currently funding some projects.

Question 12: Is there any evidence that acupuncture helps cerebellar ataxia?

Dr Giunti: There have not been any trials on acupuncture and cerebellar ataxia. In general, there is some evidence that acupuncture can help with other things such as migraine and pain, which can aggravate ataxia. In this way, acupuncture could improve your general health and indirectly improve your ataxia, but it would not be directly affecting the ataxia itself.

Dr Harrison: As a general observation, acupuncture can help with things other than ataxia, eg migraines. With conditions other than ataxia, I have had some patients who have got worse after it, so I think it does something, but I don't understand what.

Question 13: I've been told by a neurologist that migraine and epileptic medications can help ataxia as well. Can you talk about that please?

Dr Giunti: Migraines and epilepsy can sometimes be associated with certain types of ataxia, eg EA2 and familial hemiplegic migraine (FHM). In EA2 and FHM, anti-epileptic drugs, like acetazolamide and carbamazepine, and anti-migraine drugs can be helpful. However, if you have another type of ataxia that is not associated with migraine or epilepsy, eg FA or spinocerebellar ataxia, it would not be expected

that drugs for migraines or epilepsy would improve these types of ataxia.

EPISODIC ATAXIA

Question 14: I have episodic ataxia type two (EA2), and have noticed that when I get hot, it can trigger the ataxia. What is known about this?

Dr Giunti: Research has shown that cells containing mutations in the same types of proteins that are mutated in episodic ataxias types 1 and 2 (EA1 and EA2) are much more susceptible to internal temperature changes. We also know that fever can trigger ataxic attacks in people with EA1 and EA2. Less is known about the effects of outside temperature, but these are very rare conditions and we are still learning. Every day we discover something new and the information about what triggers attacks comes from the people who live with these conditions.

Dr Baxter: I agree; anecdotally many people have said that things like heat and stress and mild head injury can trigger attacks.

Dr Giunti: Caffeine and stress are also common triggers.

Question 15: My daughter is 13 and has EA2. The main issues to her are the dizziness and nausea she gets with the ataxia, which tend to persist even when she's not ataxic. Also, temperature and heat affect her so severely [in terms of triggering ataxic episodes] that we need to keep the room temperature very low. We wondered if anti-emetics would help with her nausea? Also, she can't tolerate acetazolamide; is there anything else she can try?

Dr Baxter: I have tried a few drugs other than acetazolamide, in people who can't tolerate it, but unfortunately none of them have been very successful.

Dr Giunti: There is another drug, dichlorphenamide, which works well compared to acetazolamide. Another drug is 4-aminopyridine. Unfortunately, it is difficult to find something that helps to control the ataxia, but it depends on the individual.

Dr Baxter: The problem also is whether or not these drugs are licensed for use in children. With anti-emetics, again it's a case of trial and error to find something that works. Aside from medications, sometimes some simple things can make a difference; for example a baseball cap dipped in cold water may help keep your head cool and prevent ataxia being brought on by heat.

VARIFOCAL LENSES

Question 16: Is it advisable to use varifocal lenses in glasses, given the eye problems that are associated with ataxia?

Dr Harrison: With bifocal lenses, the bottom half of the lens is cut differently from the top half, so that near vision is corrected by the bottom part of the lens, as you look down to read, and far vision is corrected by the top part, as you look up into the distance.

Bifocal lenses have been around a long time and varifocals are a newer version. Varifocal lenses perform largely the same functions as bifocals; the top part of the lens is for long distances, and the bottom part for short distances, but there is also a vertical strip in the centre of the lens designed for middle-range vision (see diagram below). As this strip is quite narrow, anyone using varifocal lenses needs to look through them very straight and turn their head to see clearly, rather than glancing sideways.

Some people with ataxia get abnormal movements of their eyes, where their eyes move from side to side; this is called nystagmus. This affects only the movement of the eyes, so the vision can be perfectly normal. However, if you have side-to-side movement of your eyes when you're trying to use varifocal lenses, it could be difficult. So if you're thinking about varifocal lenses, you need to be sure you don't have nystagmus. Another consideration is the cost; varifocal lenses can be expensive.

Expert advice from Dr Fion Bremner*:

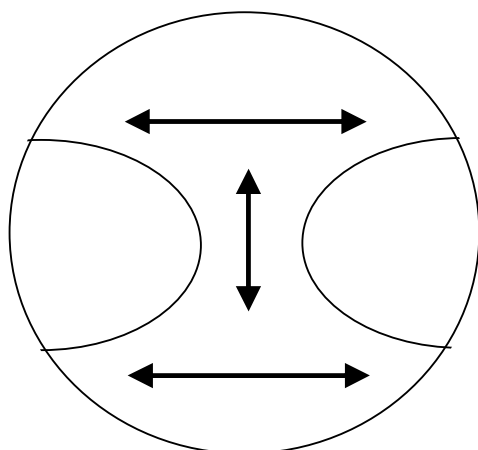
Varifocal glasses are a convenient solution only for people whose eyes are in good alignment and who can easily control the alignment and movement of their eyes. However they are not suitable for anyone who has oculomotor problems. People with ataxia invariably have eye movement problems including

misalignment, lack of coordination and in some cases involuntary movements (eg nystagmus), so most ataxic patients will find varifocals difficult to use. Having said that, it is also true that ataxic patients often struggle to put on or take off their spectacles and so may benefit from having just one pair of glasses that will work for distance as well as for near vision,

rather than two separate pairs of glasses. If this is the case then bifocals are likely to be a better compromise than varifocals.

* Consultant Neuro-Ophthalmologist at the National Hospital for Neurology and Neurosurgery; Dr Bremner was contacted after the Drs' Q&A session.

Varifocal Lens



Distance area

Intermediate area

Reading area

QUESTIONS ANSWERED AFTER THE CONFERENCE

Question 17: Could ataxia in a previous generation be mistakenly diagnosed as Parkinson's? (From someone with SCA6.)

Dr Giunti: This is possible, yes. Sometimes ataxia has some features that are similar to Parkinsonism. However, in general these conditions are better diagnosed now than they used to be, so misdiagnosis is more likely to have happened in previous generations.

Alison Stevenson:** SCA3 can be associated with Parkinsonian features, and some symptoms associated with ataxia, such as rigidity, are similar to some symptoms of Parkinson's disease.

Question 18: Have you ever heard of the initial symptoms of cerebellar ataxia going into regression? (From someone with cerebellar ataxia due to alcohol.)

Dr Giunti: Acute (short) phases of excess alcohol consumption can cause ataxia but as

the alcohol in the body is broken down and removed by the body, the ataxia disappears. However, chronic intake of high amounts of alcohol can induce permanent cerebellar ataxia. If alcohol consumption is stopped, improvements can be seen in ataxia, but the extent of the improvements depends on the degree of damage already done and the general lifestyle of the person.

Alison Stevenson: Some types of ataxia are treatable and people with these may experience stabilisation of their symptoms upon treatment. Some examples are ataxia caused by deficiency of Coenzyme Q10 or Vitamin E, which can be treated by dietary supplementation; gluten ataxia, which can be relieved by eating a gluten-free diet; and ataxia caused by alcohol, which can be relieved by eliminating alcohol consumption. If only mild damage to the cerebellum has been done, perhaps there may be some regression in symptoms, although stabilisation would be more likely in most cases. The extent of stabilisation or regression will depend upon the

amount of damage already done to the cerebellum.

Question 19: Fatigue is my biggest problem. Although I have cut my working hours to almost 60%, have rest in between I am still very tired at about 9pm. Do you have any suggestions as to how to combat this problem? (From someone with SCA2.)

Dr Harrison: Fatigue is a huge challenge for anyone with ataxia. Managing the fatigue by organising a busy day followed by a day to recover (mentioned in an earlier question) works for many.

Dr Baxter: Yes, fatigue is commonly seen in a lot of neurological disorders. However, are you talking about fatigue or sleepiness? If the problem is that you are falling asleep more than expected, there could be other causes unrelated to ataxia, such as sleep disordered breathing, which can be treated. It is worth being seen by a specialist in the field.

Alison Stevenson: Fatigue is something we commonly hear about from people with ataxia and it affects people with other long-term neurological conditions too. The cause is not known, but the extra energy required to compensate for the loss of coordination may be a contributing factor. Looking after your general health and saving your energy for important events and activities can be helpful (as already mentioned). It may also be possible to get a referral to a specialist clinic which would do an assessment and form a treatment plan to help you reduce the burden of fatigue.

Question 20: Brain Imaging and Scanning - has the technology improved so that it can give more information than brain donation?

Alison Stevenson: Some researchers are investigating brain imaging techniques in ataxia. MRS (magnetic resonance spectroscopy) is a non-invasive imaging technique that can be used to measure metabolites in the brain and thereby assess its function, and MRI (magnetic resonance imaging) measures the volumes of different brain regions, as possible ways of distinguishing between different types of ataxia and measuring progression of ataxia. Recent

research indicates that it may be possible to use these techniques to distinguish between different types of ataxia and to measure the progression of ataxia. However, this is different from the sort of information that can be obtained from brain donation.

Whereas imaging provides information about the structure and function of the brain and has the advantage of being able to analyse living material, brain donation can give more detailed structural and biochemical information. It is therefore likely that both methods will continue to be used to gain as much information as possible.

Dr Baxter: The microscopic structure of the brain can still only be seen through brain donation. Brain imaging is not yet able to look at the level of individual cells. As Alison says, the two techniques can partner each other and both contribute to knowledge.

Question 21: Are there any tests (eg MRI scans) that would detect the progression of the condition?

Dr Baxter: The best test is usually a clinical assessment by an expert in the field. Brain imaging can show changes in the cerebellum and other parts of the brain which correlate with changes in symptoms but the correlation is not always 100%.

Question 22: I am a firm believer that exercise helps in slowing the progression of CA. I have noticed one side of the body more stable than the other. Is this common? (From someone with SCA2.)

Dr Harrison: Maintaining maximum function by exercising as best you can, whatever stage your ataxia may have reached, will allow you to 'keep going' for as long as possible. Inactivity definitely leads to loss of function. Regarding laterality (one side of the body), there is always some difference in everyone (being right- or left-handed, and also having a preferred eye - this is called dominance) and is more or less evident in us all.

Dr Giunti: In general, spinocerebellar ataxia affects both sides of the body, but in some

cases one side of the body can be affected more than the other.

Question 23: I have been diagnosed with possible EA2. I experience migraines and very painful muscle rippling/spasms. Do you have any information on this?

Dr Baxter: These symptoms raise the possibility of EA1 rather than EA2. It is important to be seen by a specialist who can help with the diagnosis.

Dr Giunti: EA2 can be associated with migraine sometimes, but not with muscle rippling and spasms. Perhaps a referral to a specialist Ataxia Centre could help get a more specific diagnosis.

Question 24: Can ataxia be genetic if it is the result of a virus?

Dr Baxter: If the ataxia is clearly the result of a virus, it will not be genetic. Very rarely someone might have both causes by coincidence. Just to complicate matters the

response to viral infection is probably influenced by a person's genetic make-up, so indirectly the answer could be yes.

Question 25: I have FA caused by mitochondrial disease. Why do I have recurrent sinus problems? I've have two operations, but nothing has been found.

Dr Baxter: I do not know of a link between Friedreich's ataxia and recurrent sinus problems. Sinus problems are relatively common. Do you have other problems such as recurrent chest infections, diarrhoea or skin infections? If so, it would be worth seeing an immunologist for further advice.

Dr Harrison: Sinus problems are common in the general population and not especially associated with ataxia.

** Dr Alison Stevenson (PhD) is Ataxia UK's Research Officer.

Disclaimer

Please note that we publish this part of Ataxia UK's Conferences for information purposes only. Readers must seek their own medical advice before taking or refraining from taking any action based on the information contained in this document and nothing should be construed as medical advice given by the doctors, Ataxia UK or any of its officers, trustees or employees. No person shall have any claim of any nature whatsoever arising out of or in connection with the contents of this document against Ataxia UK or any of its officers, trustees or employees.