

Great Ormond Street Hospital for Children NHS Trust

and the Institute of Child Health



RS/FH/PX27192/h

9 August 1999

Great Ormond Street
London WC1N 3JH

Telephone: 0171-405 9

Medical Report on

Leanna MILLS dob: 29.12.94

6 Parry Close Glendale New South Wales 2285 AUSTRALIA

Leanna was seen for consultation in Out Patients on 4th August 1999.

She is a four and a half-year old girl. Pregnancy was said to be normal, she was delivered by an elective Caesarian section at thirty-eight weeks because of cephalo-pelvic disproportion. There were no immediate neonatal concerns. She had mild jaundice that did not require treatment. She fed poorly at the breast, but feeding improved on changing to bottle feeds. Her early motor and cognitive milestones were all delayed and she is due to transfer from pre-school to a special school because of learning difficulties.

In April 1998 at the age of three and a half years she became unwell with fever and vomiting. On recovery from this illness, it was noted that her right arm had taken up an abnormal posture. For the next six months she was repeatedly unwell with fever, vomiting and weight loss. In October 1998 she had a viral pneumonia and the abnormal posture in her right arm became more marked, spread to her right leg which stopped her walking and over several weeks spread to involve the left side also. Since then her dystonia has remained static. Whilst taking Co-careldopa she is ambulant, but consistently becomes unable to walk within three days of stopping Co-careldopa. Since then her appetite has also been poorer, she has lost weight and is back in nappies. She also becomes drowsy and will sleep after each dose of Co-careldopa starting fifteen minutes after the dose and lasting for one and a half hours.

There is no family history of dystonia or Parkinsonism. Her father has attacks of an odd feeling in the throat associated with an inability to breath that lasts for approximately one minute and occurs approximately monthly. Her younger sister Bethany, also has dystonia and an older sister, Katie, has an attention deficit hyperactivity disorder. Leanna currently takes Co-careldopa 100mg twice daily. A trial of treatment with Carbamazepine in doses up to 60mg twice daily was unhelpful.

Examination: She is microcephalic with a head circumference of 45.5cm (less than two standard deviations below the mean). Her skin was normal. There were no dysmorphic features. Both slow pursuit and saccadic eye movements were normal. Her ocular fundi were normal. The other cranial nerves were normal. She had a mild

symmetrical four-limb dystonia (right side affected more than left) that worsened with intention. There was no orobulbar involvement. Deep tendon reflexes were brisk, she had positive toe jerks and her plantar response was withdrawn.

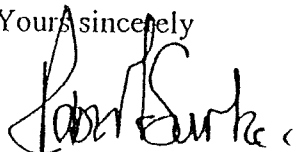
Opinion: I think that Leanna has a primary dystonia. The asymmetrical onset, progression over months and the lack of orobulbar involvement are all typical of idiopathic torsion dystonia of childhood. Approximately half of children with idiopathic torsion dystonia will have the common mutation in the DYT-1 gene and this is inherited as an autosomal dominant with highly variable penetrance. Children with DYT-1 negative idiopathic torsion dystonia may have inherited this in either a dominant or a recessive manner. The results of testing for the common mutation in the DYT-1 gene are still awaited. Leanna has been extensively investigated in Sydney for all the known causes of secondary dystonia and these investigations have been negative. I think that her poor growth, microcephaly and learning difficulties are unrelated to the idiopathic torsion dystonia.

I would recommend that Leanna continues with the current dose of Co-careldopa, but that this should be distributed more frequently throughout the day to avoid side-effects (either four or six times a day). In addition, I would recommend trials of treatment with:

1. Benzhexol, starting in a dose of 0.5mg three times a day and increasing by 1mg a day every week until one of three things happens: (a) she gets better; (b) she develops side-effects (commonly dry eyes and mouth or constipation); or (c) a total daily dose of 50mg is reached.
2. Tetrabenazine, starting in a dose of 12.5mg three times a day and increasing at two to three-weekly intervals to 25mg three times a day and then 50mg three times a day.
3. Pyridoxine, 50mg twice daily
4. Phenytoin in its usual antiepileptic dosage
5. Sulpiride
6. A combination of Sulpiride and Tetrabenazine.

For these trials, each drug should be given in the highest tolerated dose for at least three months before concluding that it has been ineffective and the next one tried.

Yours sincerely



Robert Surtees

Senior Lecturer in Paediatric Neurology