1220 POPULATION CHARACTERISTICS OF CHILDREN WITH EPILEPSY IN EPILEPSY CLINICS IN UNITED LINCOLNSHIRE HOSPITALS– A DATABASE

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Aims ULH commenced trust-wide epilepsy clinics in January 2020. Formerly lacking an infrastructure for epilepsy service, accurate data regarding workload and patient characteristics were unavailable. A detailed database was created for meaningful quantification of service needs,[1] [2] risk assessment, outcome measurement and to develop pathways towards a complete service.[3]

Methods

Population 308 patients referred to epilepsy clinic in ULH were included in the database(Refferal criteria: patients age less than 2, focal seizures, unresponsive to medications, diagnostic difficulties

Method Demographic data, diagnosis of epilepsy as per ILAE classification(2017), aetiology, information about treatment, follow up in tertiary centres (under Paediatric neurologists or epilepsy surgery centre), input by epilepsy nurses, co morbidities community paediatric and CAMHS support were collected for each patient and incorporated in to a data base of alphabetical order.

Results Age groups <2years, 2-16 years and >16 years had 29, 255 and 24 patients respectively. 114(37%) patients have a confirmed syndromic diagnosis, 22 of them being epileptic encephalopathies. 79 patients have focal seizures as part of symptomatology. 5 have confirmed diagnosis of NEAD.

29 patients have identified genetic aetiology (16 Chromosomal abnormalities, 13 single gene defects, 5 SCN1A mutations, 3 tuberous sclerosis).66 patients have structural brain abnormalities (21 prematurity related brain damage,14 hypoxic and 6 hypoglycemic, 7 CNS infection related brain injuries 2 term IVH, 8 strokes and 8 patients with brain malformations or cortical dysplasia.

119 patients (38%) were on 2 or more medications. 9 ketogenic diet, 7 have VNS and 20 patients evaluated in epilepsy surgical pathway.114 (37%) patients are already followed up in a tertiary centre.

53 patients have diagnosis for autism, 24 with ADHD, 63 with leaning difficulties, 44 with developmental delay, further 29 with isolated motor or speech delay, and 10 with severe visual and/or hearing impairment. 114 (37%) had community paediatric input. Only 6 had CAMHS input. Despite many more patients reporting psychological symptoms, quantifying mental health need was difficult.

Conclusion

Outcome An interim pathway was developed based on this capacity and demand data. Epilepsy nursing team of 2 and neurology out reach clinics established. A long-term roadmap for a comprehensive epilepsy service including a community based nursing team and transition service are planned. The need for a standard screening tool to quantify mental health need was recognised.

Limitations Of the 800 epilepsy patients in Lincolnshire, only patients referred to epilepsy clinic are included and above statistics may not directly apply to the remaining 500 patients

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1270 AN UNUSUAL CASE OF FOOT DROP

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Aims

Introduction Foot drop is due to the weakness in foot dorsiflexion. It's mostly a lower motor neuron lesion and is commonly caused by common peroneal neuropathy or L5 radiculopathy. The objective of this case report is to present an unusual cause of unilateral foot drop with upper motor neuron signs.

Methods

Case history A 14-year-old boy presented with an 11-month history of walking on his tiptoes, over the last 5 months he lost control over his right foot, which flops down whilst walking. He also felt occasional pins and needles and cannot feel the ground with his right foot. There are no symptoms suggestive of raised intracranial tension. He has a **haemangioma** on the right upper fibula.

There is a strong family history of vascular malformations in the brain, with his mum, maternal grand mum, maternal uncle, and aunt affected.

Examination There is a possible very slight wasting of the right calf, no fasciculation's, with normal tone on both lower limbs. Bilateral knee and ankle reflexes are exaggerated with the right side greater than the left. Bilateral plantar's were upgoing. There is impaired dorsiflexion of the right foot with a high stepping gait on the right side. There is reduced sensation on the right foot dorsum for fine touch. He has bilateral pes-cavus. The spine was normal. The rest of his neurologic examination is normal.

Results

MRI Head showed Left parietal 3.57x2.7 cm and right frontal deep white matter 1.36x1 cm cavernomas with subacute haemorrhage which are amenable to resection and he is awaiting neurosurgery.

Conclusion

Discussion Foot drop is mostly Lower motoneuron and commonly caused by L5 radiculopathy or neuropathy of the common peroneal nerve.

L5 radiculopathy: Patients have low back pain radiating down the leg, associated with sensory deficits over the dorsum of the foot, buttocks, lateral thigh, and calf and weakness of foot eversion, inversion and dorsiflexion, and great toe extension.

Common peroneal nerve neuropathy: Is due to the compression of the nerve at the lateral upper fibula and is associated with paraesthesias and sensory loss over the dorsum of the foot. Foot inversion and plantar flexion (tibial nerve) are normal, and the reflexes are preserved. The diagnosis can be confirmed with electromyography and nerve conduction studies. These are usually short transient episodes.

This unusual case with upper motor neuron signs is due to a structural brain lesion, his family most likely has 'Familial multiple cavernous malformation syndrome', and the child is referred to a geneticist.

Cavernous haemangioma is the third most common cerebral vascular malformation after developmental venous anomaly and capillary telangiectasia. The presentation is most commonly with seizures (38-55%) and focal neurological deficits, whilst recurrent large haemorrhages and headaches are less frequently encountered. Mutations in one of the three genes, CCM1(*KRIT1)*,*CCM2*(macalvernin), or CCM3(*PDCD10)*, are associated with this disease.

It is especially important to assess the child very carefully to differentiate between transient peripheral causes with a good prognosis like common peroneal nerve injury from more sinister causes due to structural lesions in the brain.

1260 A STUDY ON HEAVY METALS PROFILE IN CHILDREN WITH AUTISM

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Aims To study heavy metals status in children with autism spectrum disorder

Methods Cross-sectional, study done during July 2015 to June 2016. Children with autism between 3-10 years of age, fulfilling the DSM V criteria were recruited. Control group included age and sex-matched children from the same environment. Whole blood and hair were analyzed for heavy metals using ICP-MS.

Results 72 children with autism, 34 siblings and 72 controls were enrolled in the study. Autism group had significant exposure history of PICA(p=0.001), batteries(p=0.001) and scented body products(p=0.001) when compared to controls. They had higher blood levels of lead(0.001), mercury (p=0.001), arsenic(p=0.024), manganese(p=0.001) and cobalt (p=0.001), higher hair levels of lead(p=0.045), mercury (p=0.034) and arsenic(p=0.046) and lower hair levels of copper(p=0.019) and selenium(p=0.016) as compared to controls. Children with autism showed significantly elevated blood levels of lead(p=0.001), mercury(p=0.023), manganese(p=0.002) and cobalt(p=0.001), elevated hair levels of nickel(p=0.013), cadmium(p=0.045) and cobalt(p=0.05) and significantly lower levels of selenium(p=0.014) in hair when compared with their siblings. Blood levels of arsenic and hair levels of lead had significant positive correlation with autism severity. Blood levels of copper, zinc and magnesium had negative correlation with autism severity.

Conclusion This study suggests that there might be an association between high levels of blood and hair heavy metals and ASD.

675 GOAL SETTING BY ADOLESCENTS WITH CEREBRAL PALSY – A QUALITATIVE SERVICE REVIEW

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Aims Cerebral palsy (CP) is a disorder of movement and posture[1] due to a defect or lesion of the immature brain it requires treatments and therapies from a young age which would need to be carried out throughout their lives. Around 2 per 1000 live births are diagnosed in the UK.[2] Goal setting is a recommended part of therapy and is being used more commonly to help patients when planning their treatments and therapies. From previous studies,[3] when patients became teenagers, their autonomy was a priority that patients with CP highlighted. However, most of these studies were focused on young children and were conducted outside of the UK.[4] In order to address minimal research on goal setting in teenagers, a thematic analysis was conducted on patients with CP to ascertain whether goal setting was a beneficial addition to their therapy.

Methods A qualitative approach was used in the form of using semi-structured interviews. These interviews were conducted virtually on zoom and teams and asked questions on their experience goal setting, their expectations and changes they have experienced as patients. These teenagers were found by contacting healthcare staff and providing an information leaflet which was then distributed to teenagers with cerebral palsy (12-18 age) and their parents. Inclusion criteria set out involved the ability to communicate their views, an intellectual age of greater than 5 years old and being within Alder Hey Children's hospital.

Results Overall 3 interviews were conducted, recorded and analysed using thematic analysis. This helped identify multiple themes which then were grouped into 4 main themes: (1) relationship with healthcare staff, (2) Independence, (3) Motivation and (4) Participation.

The first theme identified comfort that participants had with their doctors and physiotherapists and the impact it had. The second theme explored the independence felt when making decisions on their treatments and the impact of that on their confidence. The third theme recognised motivation to complete their treatment encourage them to be more motivated in daily activities as well. The final theme identified involvement when making decisions.

Abstract 675 Figure 1

Conclusion Overall, it was identified that goal setting had a positive impact on the quality of life-based on this short evaluation and the participants have felt like they can get involved