Royal College of Psychiatrists
Section of Neuropsychiatry Annual Conference

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Robinson College
Cambridge

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THURSDAY 19 SEPTEMBER

10.10 – 11.00
Common neurological disorders – managing headache and epilepsy – a neurologists view
Dr Heather Angus-Leppan *

11.00 – 11.30
The neuropsychiatry of brain tumours
Dr Ally Rooney

Brain tumours are a histologically heterogenous group of diseases, encompassing glioma, meningioma, cerebral metastasis, pituitary tumour, and primary CNS lymphoma. Prognosis varies depending on tumour type and patient characteristics, but median survival for the most common form of brain cancer (glioblastoma multiforme) is just 12 months.

The space-occupying and/or infiltrative nature of brain tumours increases the likelihood of psychiatric morbidity. The unique characteristics of this patient population may however present challenges to the consulting neuropsychiatrist. This presentation will cover important aspects of the neuropsychiatry of brain tumours, including:

- The most frequent psychiatric complications of brain tumour
- Effects of the tumour and its treatment on psychiatric morbidity
- The evidence for psychiatric treatments in brain tumour patients
- Academic and clinical limitations and challenges
- Current and future areas of research and collaboration

Ally is a ST5 general adult / liaison psychiatry trainee with an interest in neuropsychiatry. He graduated MD from the University of Edinburgh on the topic of 'Depression in Glioma' in 2011, and co-ordinates several psychological/supportive care networks for brain tumour researchers and clinicians in the UK. He is on the MRC-funded PsySTAR programme and has just started a Neuroscience PhD in the Scottish Centre for Regenerative Medicine.

11.30 – 12.00
The neuropsychiatry of sleep disorder
Dr Hugh Selsick

Psychiatric disorders and sleep disorders interact in some complex and interesting ways. We are familiar with the impact of psychiatric disorders on sleep, but sleep disorders can have a significant impact on mental health as well. Adding a layer of complexity to this is our internal circadian rhythm, which can be desynchronised from our environment and from our sleep. Finally there is the role of medication to consider as psychiatric drugs can affect sleep and circadian rhythms. In this talk I will look at a few examples of how these factors interact in some common psychiatric disorders.

Hugh Selsick attained a BSc in Physiology, BSc Honours in Experimental Physiology and MBBCh at the University of the Witwatersrand, Johannesburg. He is the chair of the Sleep Group, a special interest group in the Section of Neuropsychiatry at the Royal College of Psychiatrists. He is the Lead Psychiatrist of the Insomnia Clinic at the Royal London Hospital for Integrated Medicine/University College London Hospitals and also works in the Sleep Disorders Centre at St Thomas’ Hospital. His special interests are insomnia and the relationship between sleep and psychiatric disorders.
14.00 – 14.10
Review of Korsakoff Syndrome: A Clinical Perspective
Dr Clodagh Commane

14.10 – 14.20
Poor Quality of Life in Children and Adults after a seemingly good recovery from Encephalitis: results from an English cohort
Dr Parashar Ramanuj

14.20 – 14.30
Delirium, dementia and the role of microglial cells: a review
Dr Akshay Nair

14.40 – 15.30
Debate: using a rare resource – Neuropsychiatrists have no place in the management of psychiatric disease associated with common neurological disorder
Dr Mayur Bodani & Dr Howard Ring *

FRIDAY 20 SEPTEMBER

09.30 – 10.30
“The Child is father of the Man” (and Woman) A Neuropsychiatric Approach to Vulnerability and Causation
Dr Jonathan Bird

The purposes of the neuropsychiatric medico-legal report in civil litigation head injury cases includes an assessment of the severity in the head injury and of any other neuropsychiatric aspects of the case (for instance PTSD), prior vulnerabilities, diagnosis, causation, neuropsychiatric management, prognosis and mental capacity. This presentation will concentrate on the neuropsychiatric assessment of prior vulnerability and, therefore, of causation of any disability. It will include a discussion of the legal concepts of vulnerability and causation. The neuropsychiatric hazards of genetics, pregnancy and neurodevelopment in general will be briefly presented, with a number of illustrative examples. Two particular neuropsychiatric conditions (Oppositional Defiant Disorder and Somatisation Disorder) will be discussed as prior vulnerability factors and these will be illustrated with case histories. The learning objectives will include the development of understanding of the presentation of a neuropsychiatric case to the Court and of the pitfalls of trying to explain the complexities of neuropsychiatric thinking to a civil court judge.

Dr Bird has been a Consultant Neuropsychiatrist and Honorary Senior Lecturer at The Burden Centre for Neuropsychiatry, Frenchay Hospital since 1985. He previously trained at The Middlesex Hospital and The Maudsley Hospital in London and carried out Brain imaging research at McMaster University, Ontario.

He has been Chair of the Section of Neuropsychiatry (Royal College of Psychiatrists), Founding Secretary of The British Neuropsychiatry Association, Vice Chair of The British Epilepsy Association and Council Member of The British Sleep Society.

His clinical and medico-legal expertise is in the areas of brain injury, PTSD, epilepsy, mental capacity, sleep disorders and psychiatric disorder resulting from physical injury. He produces equal numbers of reports for claimant and defence. He is a member of AEW, SEW and EWI.
11.00 – 11.30
Neuro-behavioural consequences and managing risks in childhood brain injury
Dr Anjum Bashir & Dr Jenny Brooks

The presentation will describe common challenges and impairments after childhood brain injury. It will draw on the experience of managing complex risks and specialist needs in a children neuropsychiatry unit.

11.30 – 12.00
Revisiting shell shock: blast injury or PTSD *
Dr Rafey Faruqui

13.00 – 13.45
An epidemiological approach to defining the impact of neuropsychiatric disease-lessons from epilepsy
Dr Christine Linehan

This presentation aims to outline the contribution of epidemiology to defining the impact of neuropsychiatric disease. The presentation will specifically focus on research within the field of epilepsy. From its inception, epidemiological research fundamentally altered the prevailing view of epilepsy as a rare and unremitting condition. Population-based research identifies epilepsy as a relatively common condition with good prognosis of seizure control for the majority of individuals. Globally, the impact of epilepsy is skewed in favour of those living in developed countries; an estimated 90% of people with the condition live in the developing world. Attempts to determine the costs of epilepsy estimate an annual average cost of €5,000 per person throughout Europe. This cost can be contrasted with an estimated annual cost of $25 to support a person with epilepsy in a developing country. Global figures on mortality rates will be presented which provide a crude, but important indicator of the burden of epilepsy. DALYS (disability adjusted life years) will also be reviewed which provide an indication of the impact of epilepsy for those living with the condition. The presentation will conclude with a brief review of the personal impact of epilepsy, identifying common co-morbidities, the impact of epilepsy on lifestyle and life satisfaction, and the impact of stigma. By providing a brief introduction to the contribution of epidemiology to determining the impact of neuropsychiatric disease, this presentation aims to encourage participants to explore epidemiological inquiry within their own field of research.

Christine Linehan BA, MA, Dip Stat, PhD, Reg Psych.PsSI is a Research Fellow at Trinity College Dublin, Ireland and an Honorary Senior Lecturer with the Tizard Centre, University of Kent, UK. Christine’s doctoral thesis examined the prevalence of epilepsy in Ireland, and was the first such European study to be conducted at national level. Christine is currently a member of the International Bureau for Epilepsy and International League against Epilepsy Joint Task Force’s Working Group on the Prevalence and Costs of Epilepsy in Europe. Christine’s research interests include the epidemiology of epilepsy, the psychosocial impact of epilepsy, and the impact of epilepsy among people with intellectual disabilities.

13.45 – 14.30
Considerations in developing rehabilitation services for people with acquired brain injury
Ms Donna Malley

Services for people with ‘hidden disability’ following brain injury in the UK are inadequate, and the focus of new and emerging specialised provision for complex needs is on high dependency and in-patient provision. We argue there is potential that some people with ‘hidden’ (primarily neuropsychological) disability following ABI may fall through gaps in service provision in this new commissioning environment. There is a risk that “a lack of timely and appropriate psychosocial or behavioural rehabilitation services at the beginning of the care trajectory subsequently contributes to increased length of stay in neurological and slow stream rehabilitation units, repeat presentations to primary care, and frequent use of community mental health services” p.60. (Muenchberger et al., 2011). There is a need to
understand better this particular group of people in the community who have complex needs but who are not highly dependent, in order that local community services can be appropriately designed and resourced to meet needs in the context of restricted funding, and to prevent current cost-saving measures to inadvertently lead to increased health and social care costs.

Donna is an Occupational Therapy Clinical Specialist and joined the Oliver Zangwill Centre in 1998. She has clinical and research interests in the role of Occupational Therapy in neuropsychological rehabilitation, vocational rehabilitation, and fatigue management following acquired brain injury (ABI). She is a member of the College of Occupational Therapists Specialist Section Neurological Practice Brain Injury Forum, which in 2013 produced a guidance document for OTs working with adults with ABI. She has been seconded to the NIHR’s CLAHRC for Cambridgeshire & Peterborough as a practitioner researcher since 2009.

14.30 – 15.15
Primary care support for Neuropsychiatric Conditions
Dr Greg Rogers

In this presentation I start by search and hopefully finding the common ground between primary are and neuropsychiatry. I will outline the current Quality and Outcome Framework in place to support people with Dementia, Depression, Mental health and learning Disability. From there I will describe the Directly Enhanced Services [DES] for Learning Disability, testing for Dementia in the at-risk groups DES, and the risk profiling DES, to anticipate the needs of physically and mentally vulnerable patients.

I will also describe the pilot working with the Learning Disability team working from the GP surgery in parallel clinics to the GP and plans for the future in supporting people with LD and their carers. Included in this is a personal view how a GP with and Enhanced Role [formally GP with Special Interest] could be further support for neuropsychiatry.

The final part of the presentation looks at ways of working together more in helping people with Conversion Disorder and the growing numbers of people with dementia and epilepsy.

Greg is a GP in Margate spending a third of his time as a GP with a Special Interest in Epilepsy (GPwSI) for East Kent. He is the recently appointed RCGP clinical Champion for Epilepsy and was previously the UK GP Epilepsy Society [International League Against Epilepsy]. Greg was a member of the guideline development groups for the recent NICE Epilepsy Update and the NICE epilepsy quality standards and commissioning framework. In his spare time he enjoys sailing and reading and hopes to finish his PhD on epilepsy service provision and re-design (UCL) this year!

*ABSTRACT/PRESENTATION NOT RECEIVED PRIOR TO PRINTING, A PRESENTATION LINK WILL BE EMAILED TO ALL ATTENDEES AFTER CONSENT OF AUTHORS IS OBTAINED*
1. Neuro Syphilis presenting with psychotic depression, tremor
Dr Gayatri Ankireddypalli, MBBS MD MRCPsych, North Essex Partnership University NHS foundation trust

The diagnosis of Neuro Syphilis still remains a clinical challenge due to its protean manifestations. Classical forms of Tabes or General paresis have become rare with discovery of penicillin. In most cases it is asymptomatic, in some it can present atypically as stroke, dementia, psychosis, mania, depression and movement disorder.

This case illustrates the need for high index of clinical suspicion in cases presenting with atypical psychiatric symptoms as subsequent management of these cases depend on prompt recognition of this illness.

48 year old gentleman was admitted to an inpatient psychiatric unit detained under section 2 of mental health act 1983. He presented with apathy, perseveration of speech, neglect, bizarre behaviour and delusions of nihilism and guilt. There was marked disproportion between severities his mood and psychotic symptoms. He was initially treated with Citalopram up to dose of 40 mg and Risperidone 2mg. He developed tremor which persisted with cessation of treatment with Risperdone.

He was referred to Neurologist for further assessment and investigation of his movement disorder. He tested positive for VDRL with 1: 4 titres, Serum IgG/IgM EIA and TPPA. Confirmatory lumbar puncture revealed CSF positive for VDRL, and FTA ABS. CT head was unremarkable. The diagnosis of Neuro Syphilis was confirmed. He was treated with 17 day course of IM Procaine Benzyl Penicillin. Patient showed remarkable improvement of his mood, psychotic symptoms as well as disappearance of perseveration and tremor. He was discharged with Citalopram 40 mg and 50mg Quetiapine.

2. Efficacy of beta blockers for management of aggression and agitated behaviour after acquired brain injury: what is the evidence?
Sadia Asad, final year medical student, Ziauddin Medical University, Karachi, Pakistan.
Dr. Rafey a. Faruqui, St. Andrew’s Academic Centre, King’s College London, Institute of Psychiatry, Northampton, UK.

Objective
To evaluate the efficacy of beta-blockers for the management of agitation and/or aggression following acquired brain injury (ABI) or traumatic brain injury (TBI).

Methods
We conducted a systematic review of medical literature between 14th July 2013 and 24th July 2013 and searched for the randomized controlled trials (RCTs) on Medline, Embase, Psychinfo, Cinahl, Cochrane Database of systematic reviews, Cochrane Clinical Trials register, TRIP Database, DARE database and Google scholar. We also searched the reference lists of included studies and published systematic reviews.

We used the following Search Terms and their combinations to study our research question: Beta Blockers, Propranolol, Acquired Brain Injury, Traumatic Brain Injury, Head Injury, Brain Injury, Aggression, Aggressive Behaviour, Agitated Behaviour and Agitation.
Results
Our review suggests that mood-stabilizing drugs like carbamezapine and anti-depressants like SSRIs are preferred over beta-blockers in clinical practice. However, published evidence demonstrates beta-blockers to have a better evidence base.

Five randomized controlled trials (RCTs) and one on-going trial were identified and included in this review, evaluating efficacy of beta-blockers, propranolol and pindolol.

1. Eleven patients with organic brain disease were inducted in a double-blind crossover, placebo-controlled study to be treated for violent behavior with propranolol, which was previously unaffected by conventional treatment. The trial revealed that propranolol was effective in reducing agitation and aggressive behavior months after the injury.

2. A second double-blind, placebo-controlled crossover trial including the above participants was conducted to study effectiveness of pindolol, reports pindolol to be better tolerated than propranolol with minimal side effects noted as they are with high dosage of propranolol.

3. A two-part, double-blind, placebo-controlled study was done to assess the effect of pindolol both on excessively aggressive behavior. Out of the thirteen participants, those with other pre-morbid personality disorders gained little benefit from pindolol while the remaining eight showed significant improvement in coping with post-ABI rehabilitation.

4. A double-blind, placebo-controlled study on twenty-one subjects evaluated use of propranolol to control agitated behavior after closed-head injury during the early rehabilitation period. Propranolol helped to reduce the intensity of agitation with no or little effect on the frequency of the episodes.

5. The ongoing DASH trial is the only latest study being conducted to establish the use of adrenergic blockade following acquired brain injury (ABI) to treat effectively the neuropsychological sequelae, the conclusion of which would provide further evidence for the safety and effectiveness of propranolol.

Comments/conclusion
The RCTs were conducted over a decade ago and conducted using small sample sizes. Open trials employing other group of medications highlight promising results in the treatment of post-ABI behavioural disturbances which reflects that more drugs, other than centrally-acting beta-blockers can be used. The need to firmly establish a treatment protocol, through randomized controlled trials involving all possible medication groups, is highly essential.

   Dr. Asma Batool (CT 1)
   Dr. Sujoy Mukherjee (Consultant Psychiatrist)
   Cognitive Impairment & Dementia Unit, West London MH NHS Trust

Aims
To review all cases of dementia under Cognitive impairment and dementia team who are on anti-psychotics, to find out what proportion of cases had a 3 monthly review of anti-psychotic medication in the last 12 months, as advised in NICE guideline No.42

Methods
- Data was collected from patients’ electronic notes (Rio).
- It included patients with dementia on antipsychotics under the care of CID team.
- There were total 129 patients.
Results

- The results showed that out of 129 patients only 19 patients had 4 or more than 4 reviews in 1 year i.e. only 14.8% patients had 3 monthly reviews.
- Out of 129, 70 patients had only dementia and out of 70 only 4 (6%) had 4 reviews.
- Out of 129, 59 patients had a co-morbid diagnosis and out of 59, 15 (25%) had 4 reviews.
- BPSD symptoms were identified and documented in 90% of the cases.
- All case records lacked documentation of prior non-pharmacological intervention.
- Carer/relative was informed in 91 cases out of 129.

Conclusions

Reducing antipsychotic use in Dementia patients has been a focus both nationally and internationally and recent reviews have highlighted a trend towards lower usage in the UK. In a recent POMH UK audit, our trust was found to have a very low usage of antipsychotics in this group, way below the national average (approx 4% vs. 13%). However, a low usage does not guarantee adequate monitoring of the patients and that should be a focus of improving quality of care in this group. Our audit highlights the need to improve regular review and improved focus on non-pharmacological management of behavioural symptoms.

4. The Treatment of Multiple Sclerosis Induced Psychosis: A Case Series

Mr Matthew Alexander Boissaud-Cooke, Mr Thomas L. Lewis
Warwick Medical School, Institute of Clinical Education, Medical School Building, University of Warwick, Coventry, CV4 7AL.

Aims

Psychosis is a complex presentation of Multiple Sclerosis (MS) occurring in 1-3% of patients potentially requiring neurological and psychiatric treatment. No meta-analyses or clinical trials have been conducted that specifically examine the use or efficacy of antipsychotics in MS. We aim to identify any consensus on best treatment for MS-induced psychosis in published case reports.

Methods

A MEDLINE search with terms related to “Multiple sclerosis” and “Psychosis” was conducted to identify case reports. Case reports were selected based on inclusion criteria and showed a patient presenting with symptoms of psychosis with new onset/or known MS. Papers meeting the inclusion criteria were obtained and data extracted using a standardised form.

Results

The search identified 74 articles, with 22 case reports. 12 papers met the inclusion criteria with 15 patients. The mean age was 39.8 years with 67% of cases female. This was the first presentation of MS in 10 patients. There were no common psychotic presentation symptoms. A range of antipsychotics including Olanzapine, Risperidone, Haloperidol and Quetiapine were first-line treatment for psychosis with limited efficacy. There was no clear indication at presentation which antipsychotic would be most effective in any given case. Aripiprazole and high dose steroids proved effective in 3 cases of treatment-resistant psychosis.

Conclusions

There is no consensus for the optimal treatment of psychosis in MS. MS can provide the psychiatrist with difficulties in management given the lack of clear guidance and the confusing literature available regarding antipsychotic usage and subsequent remission. Further systematic larger scale trials are required to identify efficacy of treatment but given the small numbers of those affected this will prove difficult. The approach to treatment remains highly patient-specific and not clearly evidence based. It is important to treat the MS as well as the symptoms of psychosis.
5. Catching an NMDA-receptor encephalitis: Clinical features to discriminate from other psychiatric syndromes  
Alastair Catto FY2 Liaison Psychiatry, Christopher Hilton Consultant Psychiatrist

Introduction
NMDA receptor encephalitis is a rare reversible cause of neuro-psychiatric disturbance. It frequently presents with characteristics which can resemble psychosis, catatonia and Neuroleptic Malignant Syndrome (NMS). We aim to highlight the difficulties of establishing a diagnosis of NMDA encephalitis and how it might be distinguished from these other psychiatric syndromes.

Methods
A recent case of a young woman is described with particular focus on neuropsychiatric symptomatology. We then report the results of targeted systematic literature review between 2005-2013 of papers comparing clinical features of catatonia or NMS to NMDA receptor encephalitis in an attempt to develop an aid for psychiatrists to differentiate these illnesses.

Results
In the described case many of the key features of catatonia and NMS are displayed at various points during her illness before an eventual diagnosis of NMDA encephalitis.

The literature review reveals 10 papers and a total of 11 case reports linking NMS or catatonia to confirmed NMDA encephalitis. Of 11 case reports of confirmed NMDA encephalitis, 10/11 demonstrated psychotic features, 8/11 had concomitant catatonic features and 5/11 fever following exposure to antipsychotic medications suggesting NMS. Reported average time to diagnosis was 43 days. The features that might have raised early suspicion of NMDA encephalitis included first episode of mental disturbance 11/11, acute deterioration 9/11, seizure-like movements (with or without epileptiform activity) 10/11, poor memory 7/11 and autonomic instability 6/11.

Conclusion
NMDA encephalitis can present with features suggestive of psychosis, psychiatric catatonia and NMS. A high index of suspicion is required for its diagnosis. We postulate that patients presenting with first episode psychosis who develop catatonic features, seizure-like movements or autonomic disturbance could be tested for NMDA antibodies as part of their work up.

6. Aberrant Functional Connectivity in Schizophrenia
Dr Linda Chan, Medical Student, University of Birmingham Medical School
Dr Pavan Mallikarjun

Current understanding of brain organisation suggests the existence of spatially and temporally distinct functional networks. Three networks have been identified in schizophrenia including: the resting state default mode network, task active central executive network, and salience network which mediates the switch between networks. Aberrant network connectivity has been proposed as a central pathological mechanism in schizophrenia. This study aims to identify the temporal and spatial interactions of the networks, which is currently poorly understood. Functional magnetic resonance imaging was performed on 18 patients with schizophrenia, and 18 age, gender, and socioeconomically matched healthy controls, during an N-back working memory task. Group independent component analysis identified six components of interest: the frontal and posterior default mode network; left and right central executive network; and the bilateral insula and anterior cingulate cortex, together comprising the salience network. Functional network connectivity analyses revealed a decreased connectivity in schizophrenia. However connectivity between the subcomponents of the salience network was greater in schizophrenia (r = 0.27, p < 0.01) than controls (r = 0.12, p = 0.02). Interestingly the time courses of the subcomponents of the...
salience network were anti-correlated, whereas subcomponents of the default mode network were correlated with one another, as were the subcomponents of the central executive network. Decoupling of the salience network subcomponents, alongside their increased functional connectivity, suggests disorganised behaviour of this network, and subsequent aberrant control of its network switching capabilities. Such activity is believed to lead to the clinical manifestations of schizophrenia.

7. Irritability Symptoms in Gilles de la Tourette Syndrome

Joanna H. Cox, Medical Student, College of Medical and Dental Sciences, University of Birmingham
Prof. Andrea E. Cavanna, Dept of Neuropsychiatry, Birmingham and Solihull Mental Health Foundation Trust and University of Birmingham

Aims
Gilles de la Tourette Syndrome (GTS) is a neurodevelopmental disorder characterised by multiple motor and vocal tics, in association with behavioural symptoms. Neuropsychiatric co-morbidities, particularly obsessive-compulsive disorder (OCD) and attention-deficit hyperactivity disorder (ADHD) are relatively common in GTS, and previous studies have also shown a link between GTS and impulse-control disorders (ICDs). The most prevalent ICDs expressed in this population are intermittent explosive disorders and self-injurious behaviours, a precipitant of which may be irritability. This study investigated the clinical correlates of irritability symptoms in an adult sample of patients with GTS and specifically assessed whether there is any relationship with tic severity.

Methods
Data were collected from 101 patients with a diagnosis of GTS using a semi-structured clinical interview plus a battery of clinician-rated scales and self-report questionnaires. Irritability was assessed using the Irritability Questionnaire (IRQ), a validated scale purporting to measure severity of irritability symptoms. Tic severity was measured using the Yale Global Tic Severity Scale Score (YGTSS), a clinician-rated scale.

Results
A moderate positive correlation was found between IRQ score and total YGTSS tic severity score (r=0.314, p<0.01) and vocal tic severity score (r=0.391, P<0.01) in this patient population. Furthermore, mean IRQ score was significantly higher in patients with a diagnosis of co-morbid ADHD, compared to those without (t=1.98, p=0.05).

Conclusions
Irritability symptoms are frequently reported by patients with GTS, especially in the presence of more severe tics (especially vocal tics) and co-morbid ADHD. This association may be due to increased requirement for tic suppression, intensifying premonitory urges, or neurobiological dysfunction underlying GTS and ADHD. As patients with these clinical characteristics may present increased risks for angry outbursts, behavioural therapies should include interventions targeted at reducing irritability.

8. Efficacy and Tolerability of Carbamazepine in Management of Aggression in Brain Injury, Dementia, and Neuropsychiatric Conditions: A Systematic Review of Medical Literature

Dr Tariq Khan, Neuropsychiatry Service, St. Andrew’s Healthcare, Northampton NN1 5DG
Dr Rafey A. Faruqui, St Andrew’s Academic Centre, Kings College London, Institute of Psychiatry, Northampton NN1 5BW

Aim/ Objective
To evaluate efficacy and tolerability of Carbamazepine in management of behavioural disturbances following acquired brain injury, dementia, and neuropsychiatric conditions.
Method
We searched electronic databases including MEDLINE, PubMed, Psychinfo, TRIP, Embase and Google scholar.

Search terms: head injury OR brain injury OR acquired brain injury OR neurobehavioral disorders OR traumatic brain injury OR episodic dyscontrol OR aggression OR agitated behaviour OR dementia OR neuropsychiatric disorder AND carbamazepine

Results
Only RCTs in English language were included. The number of RCTs retrieved was 50, only 5 were relevant to study question.

1. Closed-Head Injury, Prospective Open Trial-8 Week Duration: 10 subjects with agitation and anger outbursts, dose range 400-800 mg per/day. Results: Improvement in irritability, disinhibition, agitated behaviour, and social functioning without adverse impact on global cognitive functioning.

2. Double-Blind, Placebo-Controlled Study of Seizure Prophylaxis after Brain Injury, Trial Duration 6-44 Months: Reporting tolerability in terms of cognitive and emotional performance and comparing carbamazepine (42) with Phenytoin (40). No significant differences were found in the performance of patients in medication and placebo groups for either drug.

3. Randomized, Multi-site Parallel Group Study on Agitation and Aggression in Dementia. Trial Duration 6 Weeks: 51 subjects with agitation and dementia on carbamazepine were compared with placebo. Carbamazepine dose at 6 weeks was 300 mg/day, and a mean serum level of 5.3 micrograms/ml. Results showed significant short-term efficacy of carbamazepine for agitation with generally good safety and tolerability.

4. Follow-up Continuation of Trial reported as number 3 above; 6-12 Week Follow-up: Withdrawal from controlled carbamazepine therapy followed by further carbamazepine treatment in patients with dementia: group treated with modal Carbamazepine dose of 300 mg/day. Results concluded an improvement in measures of agitation and aggression. 2 deaths and 4 adverse events resulted in attrition from the group. Neither of the deaths were attributed to Carbamazepine: only one serious adverse event was linked to this medication.

5. Non-Randomized, Double Blind, Placebo-Controlled Crossover Study, 25 Subjects with Dementia: Carbamazepine and placebo during two 5-week periods separated by a 2-week washout. The modal dose was 300 mg/day. Results indicated that carbamazepine in this dose range was well tolerated for the 5-week treatment period in this frail elderly sample.

Conclusions
Carbamazepine has been successfully used for symptom modification in management of aggression in brain injury, and dementia. Reported trials have been conducted using small sample sizes. Tolerability may be a concern for these patient groups requiring close treatment monitoring and evaluation of side effects in clinical populations.

9. Mania following Head Injury - a Case Report
Dr. Charlotte Marriott, Dr. Laki Kranidiotis, Dr. Shraboni Bohra, Worcestershire Health and Care NHS Trust

Introduction
Psychosis has long-been recognised as a complication of head injury. We present a case of a Severe Manic Episode with Psychosis following head injury, with evidence of diffuse axonal injury on MRI, in a young man without other risk factors for mental illness.
Case
A.H. is a 27 year old man without previous psychiatric history. He sustained a head injury on 27/11/2009 during a road traffic accident (RTA), necessitating 2 months of ITU care and neurorehabilitation. He had a further RTA on 21/03/2013 but was not thought to have sustained a significant head injury at this time and CT scan was normal. He presented with Mania with Psychotic Symptoms, including complex grandiose delusions, on 03/04/2013 and was admitted under Section 2, MHA. He was refractory to treatment until semi-sodium valproate and quetiapine were introduced in combination. MRI showed multiple scattered focal areas of blooming artefact in the grey-white junction bilaterally with focal areas of blooming artefact in the bifrontal deep white matter and in the body of the corpus callosum. The ventricles, in particular the lateral and third ventricle, are more dilated than would be expected for age, raising suspicion of central brain volume loss. The overall appearance is of scattered foci of blood breakdown products, highly suggestive of chronic sequelae of diffuse axonal injury. He does not show evidence of frontal lobe deficits clinically and is now euthymic, although he has some residual grandiose delusions.

Comments
This is an interesting case of Mania with an organic aetiology, which was refractory to treatment, and has an unclear prognosis. He responded well to quetiapine, as the literature suggests.

10. Self-harm in people with epilepsy: a retrospective cohort study identifying patient and self-harm characteristics
Dr Nicholas Meyer, Academic Clinical Fellow, Institute of Psychiatry, King’s College London
Ms Merryn Voysey, Senior Medical Statistician, Centre for Statistical Medicine, University of Oxford
Ms Jane Holmes, Medical Statistician, Centre for Statistical Medicine, University of Oxford
Ms Deborah Casey, Centre for Suicide Research, University Department of Psychiatry, Warneford Hospital, Oxford
Professor Keith Hawton, Centre for Suicide Research, University Department of Psychiatry, Warneford Hospital, Oxford

Background: Little is known about self-harm in people with epilepsy (PWE), despite suicide being recognised as a significant cause of mortality in this population.

Aims
To investigate the characteristics of self-harm in PWE presenting after self-harm, and associated demographic and psychosocial factors in this population.

Methods
The study cohort was identified using the Oxford Monitoring System for self-harm through which information is collected on patients presenting to a general hospital following self-harm. 132 PWE and 9,778 controls were identified over the 14-year study period 1994 – 2008. The diagnosis of epilepsy was confirmed through review of medical records. Demographic features, characteristics of self-harm and patient variables were compared using a regression model, adjusting for age and sex. Patients presenting from 1998–2008 were followed up for all-cause mortality to the end of 2011.

Results
Within the study period, the number of episodes of self-harm per individual with PWE was 2.04 (1.85, 2.25) times that of controls, and time to second self-harm event was reduced (hazard ratio 1.86 (1.46 – 2.38). PWE were significantly more likely to use antiepileptic medication in overdose, although genuine methods of self-harm were similar in the two groups, with no differences in suicidal intent scores, nor the proportion of patients who later died by suicide, being found. Previous outpatient psychiatric treatment, duration of unemployment, violence and housing problems were associated with epilepsy amongst people who self-harmed.
Conclusions
Within our population of self-harmers, PWE have more frequent self-harm when compared to the non-epilepsy population, with a number of clinical and psychosocial variables mediating this association. Several recent studies have identified an increased risk of suicide in epilepsy, and this study suggests that the same is true for self-harm. Identifying and modifying risk factors for self-harm in PWE may help to reduce morbidity and mortality in this population.

11. The association between C-Reactive Protein and delirium in 710 acute elderly hospital admissions
Dr Craig W Ritchie¹, Mr Thomas H Newman¹, Mr Baptiste Laurent² and Dr Elizabeth L Sampson²
¹Centre for Mental Health, Imperial College London, London, United Kingdom
²Department of Psychological Medicine, University College London, London, United Kingdom

Aims
Despite evidence supporting a neuroinflammatory disease process in delirium, the relationship between the inflammatory marker C-reactive protein (C-RP) and delirium remains unclear. We investigated the relationship between C-RP and delirium and its severity as well as interaction with medical diagnosis.

Methods
From an existing research database of 710 patients over 70 years old admitted to a Medical Acute Admissions Unit, data was analysed which included C-RP levels, presence of delirium and other clinical and demographic outcomes. Delirium was assessed using the Confusion Assessment Method (CAM). Primary diagnoses were grouped into five categories; cardiovascular, musculoskeletal, infection, metabolic and other. A t-test and logistic regression were performed to investigate the relationship between C-RP and delirium. The relation between C-RP and delirium severity was tested by Analysis of Variance and non-parametric Spearman’s correlation coefficient calculations. Logistic regression was used between C-RP and delirium for each diagnosis group.

Results
There was a strong association between elevated C-RP levels and delirium (t=5.09; p<0.001); this association was independent of other potential risk factors for delirium (Odds Ratio = 1.32 (95% CI= 1.10-1.58) p=0.003). There was no association between C-RP elevation and delirium severity. There was no association between C-RP and delirium in the populations with cardiovascular disease or infection upon admission, but there was in the musculoskeletal (OR 2.19 (95%CI: 1.19-4.02)) and metabolic groups (OR 2.24 (95%CI: 0.92-5.45)

Conclusions
There is an association between elevated C-RP and delirium. This association is most notable in patients admitted because of musculoskeletal disease. This implies that C-RP plays a key role in the genesis of delirium that may be more important in people with musculoskeletal disease whilst other processes may be more central in alternative diagnoses. It is recommended that longitudinal studies investigating several inflammatory factors are required to elucidate pathways to delirium to inform intervention studies.

12. Post-Ictal Psychosis: A Case Control Study
Dr. Georgy Pius (ST5), Manchester Mental Health and Social Care Trust, UK
Dr. Richard Justin Hackett, Consultant Psychiatrist and Neuro-Psychiatrist, GMW Mental Health NHS Foundation Trust & Salford Royal NHS Foundation Trust, UK

Background
Since Post-Ictal Psychosis (PIP) came into prominence in the 1980s as a separate clinical entity within the umbrella of Psychosis of Epilepsy (POE), there have been relatively few studies on the subject. Our understanding of its risk factors and pathophysiology is still unclear in some areas.
Aim
The aim of this research study was to identify the risk factors for Post-Ictal Psychosis (PIP) and study its phenomenology.

Methodology
The study design is a case control study comprising 22 subjects with a diagnosis of Epilepsy and Post-Ictal Psychosis (cases) and 44 subjects with Epilepsy (controls). Demographic and clinical characteristics including risk factors were reviewed retrospectively and compared across both the groups.

Results
In the Post-Ictal Psychosis (PIP) group, there was a clear association of increased seizure frequency prior to PIP. The mean duration of epilepsy prior to onset of PIP was 18.82 years. Family history of psychiatric illness was similar in both the groups. There was a tendency towards association of focal epilepsy to PIP compared to the control group. Looking at the phenomenology of PIP, the duration of psychotic episode ranged from 12 hours to 2 weeks and the clinical features comprised mainly of auditory and visual hallucinations, religious and grandiose delusions and significant violent behaviour.

Conclusion
The author’s study echoes previous studies’ findings in areas of increased seizure frequency and chronicity of epilepsy prior to Post-Ictal Psychosis (PIP). However there is no association of family history of psychiatric illness to PIP and this along with the finding of a tendency towards an association of focal epilepsy to PIP suggests that epileptic factors play a more significant role than genetic factors in the emergence of PIP. Consistent with previous studies, our findings show that the clinical symptomatology of PIP is not schizophreniform in nature.

13. Epilepsy in adults with learning disability
Dr Dina Rachis, CT 3 Psychiatry trainee, Dr Kamalika Mukherji, Consultant in Psychiatry of Learning disability

Background
Epilepsy and learning disability are commonly associated. 13-24% of people with learning disability suffer from epilepsy. In this population group, management of epilepsy can be challenging as seizures can be frequent, go on for longer, are more complex and refractory to treatment. Appropriate diagnosis and management of epilepsy is essential for both patients and their carers. Therefore we must ensure that our service provides the best standards of care.

Aim
This audit aimed to identify areas within our service which required improvement.

Method
An audit tool, incorporating the standards set by the NICE guidelines, was employed. This tool was used to collect information from electronic and paper records of a representative sample of 30 adults.

Results
The audit results recognised areas of excellent clinical practice, such as good monitoring of side effects of medication and good control of seizures in 40% of patients, who have been free from seizures over the last 2 years. However, several areas of improvement were identified. A discussion between clinician and patient or their carers regarding the risks of unexpected death in epilepsy was adequately recorded in only 13% of cases. Only 40% of females of child bearing age were on contraceptive medication. Additionally, a risk assessment was carried out for just 57% of patients.
Conclusions
Although sudden unexpected death in epilepsy is a sensitive subject, warning patients and/or their carers is necessary. Having a risk assessment completed and ensuring female patients of child bearing age are on contraceptive medication, is equally important.

14. Bromodomain containing 1 gene (Brd1) gene knock-out female mouse: a novel model for major depressive disorder

Dr. Anto P. Rajkumar, MD, DPM, DN8, MRCPsych\textsuperscript{1,3}
Mr. Per Qvist, MSc,\textsuperscript{1,3}
Dr. Jane H. Christensen, PhD,\textsuperscript{1,3}
Dr. Tue Fryland, PhD,\textsuperscript{1,3}
Dr. Mette Nyegaard, PhD,\textsuperscript{1,3}
Ms. Gudrun Winther, MSc,\textsuperscript{2}
Prof. Jens R. Nyengaard, MD, PhD,\textsuperscript{4}
Prof. Gregers Wegener, MD, DMSc,\textsuperscript{2,3}
Prof. Ole Mors, MD, PhD,\textsuperscript{2,4} Prof. Anders D. Borglum, MD, PhD,\textsuperscript{1,3}

\textsuperscript{1} Department of Biomedicine, Aarhus University, Aarhus, Denmark
\textsuperscript{2} Translational Neuropsychiatry Unit, Department of clinical medicine, Aarhus University, Risskov, Denmark
\textsuperscript{3} iPSYCH, Denmark
\textsuperscript{4} Department of Clinical Medicine, Aarhus University, Aarhus, Denmark

Aims
The schizophrenia and bipolar disorder associated Bromodomain containing 1 gene (BRD1) is involved in epigenetic regulations in the developing and adult brain (1) through acetylation of histone H3K14 (2). Brd1 expression is upregulated by stress and electroconvulsive seizures in rat hippocampi (3) Selective histone deacetylase inhibitors, functionally analogous to BRD1, exert significant antidepressant activity (4). We have recently developed a constitutive knock-out mouse heterozygous for Brd1 (Brd1\textsuperscript{+/−} mice). In this study, we aimed to investigate their affective behaviours and neurobiology.

Methods
We employed following behavioural experiments, (i) Locomotion: Open Field, (ii) Depression: Forced swim (FST), Tail suspension (TST) and Sucrose preference tests, (iii) Anxiety: Bright open field, Light and dark box and Elevated plus maze, (iv) Cognition: Fear conditioning and 8-arm radial maze. FST and TST were repeated with Imipramine and Fluoxetine. We performed, (i) High-performance Liquid Chromatography to assess neurotransmitter levels, (ii) Golgi-cocox staining to study the neuronal morphology and dendritic branching of Anterior Cingulate Cortex (ACC) pyramidal neurons, and (iii) Next Generation RNA-sequencing to identify differentially expressed genes in Amygdala.

Results
Female Brd1\textsuperscript{+/−} mice exhibited significantly more anhedonia and behavioural despair that could be reversed by antidepressants. They had significantly less serotonin in their frontal cortex (p=0.03) and less striatal dopamine (p=0.01). They displayed context-dependent learning deficits and impaired visuo-spatial memory. ACC pyramidal neurons of female Brd1\textsuperscript{+/−} mice had significantly shorter dendrites, less dendritic branches and less dendritic spine density (p<0.001). Finally, cell junction associated genes were found differentially regulated in their amygdala (p=0.04).

Conclusions
Depressive phenotype and its reversibility by antidepressants indicate the validity of female Brd1\textsuperscript{+/−} mice as a novel model for major depressive disorder (MDD)\textsuperscript{[5]}. As histone acetylation mediates the epigenetic programing of Gene-Environment interactions\textsuperscript{[6]}, the female Brd1\textsuperscript{+/−} mouse model may help further studies evaluating the epigenetic changes and neurodevelopmental abnormalities, pertinent to MDD.
15. Poor Quality of Life in Children and Adults after a seemingly good recovery from Encephalitis: results from an English cohort

Dr Parashar P Ramanuj, South London and Maudsley NHS Foundation Trust
Dr Julia Granerød, Public Health England (Virus Reference Department)
Dr Nicholas W S Davies, Chelsea and Westminster Hospital (Department of Neurology)
Dr Stefano Conti, Public Health England (Biostatistics Department)
Prof David W G Brown, Public Health England (Virus Reference Department)
Dr Natasha S Crowcroft, Public Health Ontario (Communicable and Infectious Disease Department)

Aims
Those who survive encephalitis often suffer neuro-psychiatric complications. Little is known about the impact of these sequelae on a person’s health-related quality of life (HRQoL). We sought to measure HRQoL in encephalitis survivors and compare it between different aetiologies and with other illnesses.

Methods
We used the short-form 36 (SF-36) to measure the HRQoL in patients ≥15 years and the short-form 10 (SF-10) for patients <15 years. We posted questionnaires to individuals 6 months after discharge from hospital and scored returned questionnaires according to a standardised protocol. All scores were normalised to an age and sex matched population. We used multivariate analysis to investigate the relative impact of clinical and socio-demographic variables on the post-encephalitic HRQoL in adults.

Results
Of 148 individuals eligible for a HRQoL survey we were able to follow up 109 (74%). Of these we received 61 successfully completed SF-36 and 20 completed SF-10 questionnaires (response rate 74%). Patients scored consistently worse than the general population in all domains of the SF-36 and SF-10. In those aged ≥15 years, infectious encephalitis was associated with the worst HRQoL, scoring on average 5.64 norm-based points less on the SF-36 compared to immune-mediated encephalitis (95%CI -8.77 – -2.89). In those aged <15 years the worst quality of life was seen following encephalitis of unknown aetiology. Immunocompromise, unemployment, poor recovery at discharge and the 35-44 age group all had an independent negative association with HRQoL. Both the SF-36 and SF-10 measured unfavourably with other comparator diseases, including brain glioma and HIV.

Conclusions
In addition to the high mortality and morbidity associated with encephalitis, the neuro-psychiatric sequelae have a profound impact on survivor wellbeing and quality of life, even for those who make a seemingly good recovery. Many of these adverse consequences can be minimised by the prompt identification and treatment of encephalitis.

16. Compliance with Clozapine Initiation Guidelines

Dr Shaffiullah, LAT CT3, Birmingham Solihull Mental Health Trust
Dr R. Evans, Consultant Psychiatrist, Matthew Elswood, Pharmacist Central Pharmacy and Solihull Assertive Outreach Team

Introduction
Clozapine is associated with serious adverse effects in a minority of patients, including haematological problems and myocarditis which can be life-threatening. It is therefore important that treatment and monitoring takes place in a safe and effective manner.

Aims and Objectives
To assess organisations’s level of compliance with clozapine initiation guideline that was approved in Sept 2012.
Methods
A total of 28 inpatients were started on clozapine during the period of September 2012 to end of December 2012. A complete data set was available for 25 out of the 28 patients. Data was collected from Clozapine initiation sheet.

Guidelines
1) Pre-initiation physical health checks, including blood tests.
2) Administration of doses of clozapine according to the relevant titration schedule.
3) Mandatory monitoring of physical health for the first 4 weeks after initiation of clozapine.
4) The requirement to give the patient information regarding clozapine before starting treatment.

Results
1) Use of clozapine varies across the trust and may be inequitable.
2) Mandated monitoring tails off over the 4 week period.
3) Omission of medication and/or documentation of administration of medicines was an issue. (1 in 10 of the prescribed doses of clozapine may have been omitted).
4) In this study period almost 1 in 3 patients who started clozapine had abnormal results recorded during the 4 week monitoring period.
5) Only 68% of patients were given information about clozapine.
6) Around 43% of patients had abnormal results recorded in the pre-initiation (baseline) checks stage.

Recommendations
1) There is a need for improved compliance with pre-initiation checks.
2) This report should be shared with the relevant clinical disciplines through presentation at zonal clinical governance meetings.
3) Monitoring of observations during the first 4 weeks of treatment must be performed to reduce risk to patients.

17. Neurogastroenterology or Neuropsychiatry-gastroenterology?
Dr K Stanley, CT2, North Essex Partnership Foundation Trust

Background
Neurogastroenterology is a medical specialty that encompasses the study of the brain, the gut, and their interactions and the relevance for abdominal pain and functional or idiopathic gastrointestinal disorders such as Irritable Bowel Syndrome. The pathophysiology of the gut in several brain disorders has not been looked at. The Enteric Nervous System (ENS), now commonly referred to as our gut’s brain, lies in our intestines’ wall, and shares many comparisons with the brain in our head. They both develop from the same embryogenic tissue connected together by the vagus nerve, made up of millions of neurons and several neurotransmitters. This review considers the role of the gut in mental health disorders such as Alzheimer’s disease and Autism.

Method
Electronic databases and Google Scholar were searched for relevant articles and research papers.

Results
The neurofibrillary tangles and amyloid plaques implicated in the aetiology of Alzheimer’s disease have also been found in neurons in the gut. This is similar for another neurodegenerative condition Parkinson’s disease where filamentous intraneuronal inclusions or lewy-bodies were identified in dopamine-producing neurons in the gut. These lesions are being found at an early stage of the disease which has led to the suggestion of the disease process starting in the gut and spreading to the brain via the vagus nerve. In Autism, the same genes involved in synapse formation between neurons in the brain are involved in the alimentary synapse formation. These genetic mutations and subsequent abnormalities in the
serotonergic system may explain why many children with autism have gastrointestinal symptoms.

Comments
The precise role of the gut, if any, in the pathophysiology of brain related conditions is unknown. The nascent of neurogastroenterology however is likely to increase our understanding of the ENS and its relationship with the brain.

18. Motor stereotypes in adult patients with Tourette syndrome

**Maneeka Ubhi, Medical Student, University of Birmingham Medical School**

Prof. Andrea E. Cavanna, Department of Neuropsychiatry, Birmingham and Solihull Mental Health NHS Foundation Trust and University of Birmingham

Correctly identifying the repetitive movement in patients with Tourette Syndrome (TS) can be a challenge as some patients express stereotypes alongside their tics. Distinguishing the movement is important as treatment is different in tics and stereotypes. There has been little research into stereotypes in adult patients with TS. This study compared the clinical characteristics of patients with TS with and without stereotypes in order to aid clinicians when characterising repetitive movements. The prevalence of stereotypes in our sample of adult patients with TS was 14.2 (95% confidence intervals 9.5-20.7%). Clinical and demographic data were analysed from 21 patients with TS with stereotypes and 127 patients with TS without stereotypes. Patients with stereotypes were significantly more likely to express obsessive compulsive disorder (OCD) (p=.023), attention deficit hyperactivity disorder (ADHD) (p<.001) and Asperger’s syndrome (p<.001). Asperger’s syndrome was found to be a strong predictor of stereotypy severity (p<.001). This study has provided new information that the presence of co-morbid OCD, ADHD and Asperger’s syndrome in TS patients may raise the clinical suspicion that some of the movements may be stereotypes.

19. The use of Radial Width of the Temporal Horn (RWTH) Measurement in Diagnosis of Alzheimer’s Dementia in the Rotherham Memory Service

**Dr Wan Hassan, Wan Izwin (St6 in Old Age Psychiatry, Sheffield)**

**Dr Wright, Simon (Consultant in Old Age Psychiatry, Rotherham)**

**Dr Nisar, Musyayyada (CT3, Sheffield)**

**Aim**
The study uses the Frisoni method, which uses measurements of the radial width of the temporal horns (RWTH) in assisting diagnosis of Alzheimer’s dementia. The aim of the study is to measure whether the use of RWTH measurement adds to the sensitivity and specificity in diagnosing Alzheimer’s dementia when used as a tool in the Rotherham Memory Service

**Method**
Patients who presented to the memory service are referred for a 64 slice CT scan done at the Rotherham DGH department of radiology as part of the assessment process. Consent and capacity assessments are usually performed prior to the CT scan. From the 1st of April 2011 patients will receive CT scan which is then specially reconstructed to measure the RWTH. The report will indicate the measurement of the RWTH as well as other relevant comments. We obtained the list of patients who received the CT scan since April 2011 to 1st October 2011 through the CT department. From the above list, we found 272 patients in total. Sensitivity and specificity were then calculated from the data.

**Results**
Initial analysis excluded 27 patients due various diagnostic reasons. 245 patients that presented were examined for their corresponding radial widths of the temporal horn. The diagnosis is then reviewed by 2 independent psychiatrists. Most of the patients in this study had a diagnosis of Alzheimer’s dementia (50.2%) followed by mild cognitive impairment.
(32%). After adjusting for variances the final sensitivity is 100% and specificity was 97% for measurements above 5 mm and 95% for measurements above 5.3mm.

Discussion
The sensitivity of the technique to clarify a clinical diagnosis of Alzheimer’s disease exceeded the original 93% reported by the original paper by Frisoni et al. However there are limitations including the number of patients used as well as reliance on the clinician’s diagnosis.