

# Future Ψ



# TABLE OF CONTENTS

## 3 – Editorial

Ellisiv Clarke

## 4 – Reflection on my section – and 98 hours in A+E

Dan Sharpe

## 6 – One Stop – Evaluating waiting times in Community Mental Health

Dr Tomi Ashoye

## 8 – Social Media and Mental Health

Dr Mark Fellows

## 10 – Prison City

Jack Kerwin

## 12 - Experience in Liaison Psychiatry

Dr Samuel Jones

## 15 – A Gap in Care

Dr Mary Broughton

## 17 – Treating the spectrum of normal? Oxytocin therapy in ASD patients

Lucy Whittaker

## 19 – Dissecting the mind: Reflections on a summer research project

Anastasia Mirza-Davies

## 21 - Long-lasting neurotoxic sequelae of lithium toxicity – A case study

By Dr Maria Vittoria Capanna

## 23 - Crisis Assessment and Intervention for Adolescents in Northern Ireland

Patricia Vinchenzo

## 25 – Working in Psychiatry – The Importance of a Safe Space for Reflection

Bharat Velani

# Editorial

*By Ellisiv Clarke, Editor*

I write this editorial as 2018 draws to a close, and we begin to look towards the New Year and the challenges it will bring.

Collating, editing, reading and re-reading the articles submitted to this edition of FuturePsych has highlighted to me just how active, resourceful, bright and enthusiastic our young and future workforce are.

The achievements highlighted by our authors, the wealth of experience, academic advance and self-reflection detailed in each article show just some of their advancements.

This edition begins with an author who is yet to begin medical school, who shares his first-hand experience of psychiatry as a service user. We then make our way through summer projects, service appraisals and suggestions for improvements, case studies and personal reflections.

The volume and breadth of articles makes this edition of FuturePsych a gripping read.

I would like to take this opportunity to thank everyone who has contributed to this edition of FuturePsych, without whom we would not have a magazine.

Judging by what you have all achieved this year, it seems there is a very bright year ahead for mental health.



*Elle is currently in her final year of medical school at Newcastle University, where she has just finished her Masters by Research in Epidemiology.*

*Her research project studied substance misuse in young adults Elle is the current Medical Student Representative on the Psychiatric Trainees Committee and a Pathfinder Fellow.*

*To contact or submit to the magazine, email [futurepsych@rcpsych.ac.uk](mailto:futurepsych@rcpsych.ac.uk).*



# REFLECTION ON MY SECTION

(And 98 hours in A&E)

*By Dan Sharpe*

'We talk a lot about parity of esteem between mental and physical health. This was a case of equal severity to an M.I. or a stroke and we failed him.'

The words of a consultant liaison psychiatrist at the board meeting of my local hospital describing my presentation brought home to me the events I can barely remember.

*Over the summer, I had a psychotic episode. Presenting not once, but twice, at A&E has given me personal experience of the pressures the NHS mental health services face.*

It would seem a blessing that I have little recollection of those four and a bit days, seared as they are into the consciousnesses of my parents and siblings.

But first, a bit of background. As the son of a GP, medicine has always seemed like a possibility. I even wrote that I wanted to be a doctor or a lawyer in my primary school yearbook!

*Before the summer, it was all going to plan. I'd never dropped a grade, had scored in the top 5% of both UKCAT and BMAT and seemed set to*

*sail through A Levels into Medical School. But that didn't quite happen.*

Even though I took my exams whilst increasingly unwell, I did make my offer and so will be heading to Edinburgh in 2019 but, for the vast majority of the summer, that didn't look at all likely.

From the 'shared care plan' I was presented with whilst in hospital, it would seem that my psychosis (and associated paranoia) turned me acutely guilty and constantly suicidal.

*Believing I was in the Matrix and controlled by external forces, I felt as though the only way to confirm my theory (or escape this 'reality') was to try to die.*

I was ever more convinced as my (plentiful) attempts failed, utilising the many ligatures and other harmful objects readily available in my temporary home.

In hospital, without doctor review for the first two days, I became increasingly unwell with no prospect of appropriate medication; people assumed I was merely anxious about my upcoming A-Level exams rather than floridly psychotic.

After being sectioned, my care was excellent. The ward I spent 8 or so weeks in provided many activities and appropriate support, helping me with a graduated return to the community over a number of weeks.



I learned the true meaning of shared care as doctors discussed treatment options and offered me choice in what was going to happen throughout the process up until I was finally discharged.

My follow-up has been similarly brilliant. Regularly seeing not just the community doctors, but also a member of the team trained to provide CBT has helped me to reflect on and process the events that led me to this breakdown.

*Considering how I let many pressures build up shall hopefully make it less likely to occur again and I believe the experience will make me a better doctor going forwards.*

I hope by the end of my professional life, that there will be no need for patients presenting with psychiatric disorders to spend so long in such a clearly inappropriate setting as A&E.

But, in the absence of greater funding and more availability of beds, I beg that we at least provide immediate medical review and ligature-free rooms as I fear others will be more successful in harming themselves than I was.



*Dan is currently on a gap year before taking up a place to study medicine at the University of Edinburgh.*

*He is filling his time with becoming a Young Reviewer for the McPin Foundation, self-teaching Italian and reading books he should have got around to before.*

# One Stop

## Evaluating waiting times in a Community Mental Health Team

### *Problem*

Only half of those with Dementia in the UK will receive a formal diagnosis (1).

*NICE guidelines state memory services should provide a 'responsive service to aid early identification' (2).*

With this in mind, several trusts have created a specialised early memory diagnosis and support service. The aim of this service is to provide timely multi-disciplinary approach for the assessment, diagnosis and treatment of suspected dementia cases. However, there is a paucity of data on the effectiveness of these services.

### *Approach*

In an effort to reduce waiting times a community mental health service introduced a one stop assessment and diagnosis clinic.

Prior to this, patients would have an initial assessment usually by a mental health nurse and then return at a later date for a consultant led diagnostic clinic.

A group of four clinicians analysed wait times over a 2-month period

pre- and post-introduction of the one stop service.

### *Data Collection*

An audit tool was created using electronic patient records. The following data was collected:

- Date of initial referral
- Date of primary memory assessment
- Date of diagnostic clinic and treatment outcome

### *Findings*

All the patients were married and had a range of physical & psychiatric co-morbidities.

### *Pre one-stop clinic*

All cases (n=72) seen by the memory team between December 2017 and January 2018 were analysed. 76% (n=56) of the referrals were newly diagnosed with dementia or cognitive impairment and were included in this study.

The mean number of days to diagnosis is  $87 \pm 70$  days. Overall, 85% (n=35) of patients met NHS policy regarding timeframe for diagnosis and treatment within 12 weeks of referral.

The main source of referrals was GPs (95%, n=54), other sources being social services and other healthcare specialties. Mean age at diagnosis was 81.

*The most common diagnoses were Alzheimer's disease 37% (n=21) and Mixed dementia 37%.*

Least common was Lewy body dementia, with only one case. Women were more commonly diagnosed 60% (n=34).

In accordance with NICE guidelines all cases of Alzheimer's or Mixed Dementia should be offered either acetylcholinesterase inhibitors or NMDA blockers.

In our cohort 41 patients were eligible for pharmacological treatment, of those 23 cases elected for treatment, with donepezil being most commonly prescribed (n=14, 60%).

### *One stop clinic*

A total of 105 cases were seen during the study period July to August 2018. 82 patients (78%) were diagnosed with dementia or cognitive impairment.

*Following the introduction of the one stop clinic, there was a 40% increase in the number of cases seen by the service; 105 compared 75.*

Furthermore, the one stop clinic enabled faster diagnostic times, 72% (n=59) compared to 66% (n=37) of patients where seen within 12 weeks, highlighting the time-effectiveness of the one-stop clinic in decreasing wait times in EMDASS.

Patient demographics and diagnosis remained largely unchanged;

average at diagnosis was 82, mixed dementia was the most common diagnosis 55% (n= 44), followed by Alzheimer's. Donepezil was again the most commonly prescribed medication.

### *Conclusion*

Memory services have a diagnostic yield, suggesting effective referral criteria. Post introduction of the one stop clinic, a larger volume of patients were seen in a faster time.

*Dr Tomi Ashaye is a Queen Mary University of London Graduate with an intercalated BSC in Public Health.*

*He is currently working as a Foundation Doctor and researching strategies to optimise resources within the NHS.*



# Social Media And Mental Health

## An Opinion Piece

In my current job as an FY2 at the Conquest Hospital in Hastings, one of my favourite hobbies is to take a stroll through one the woodland walks in the beautiful countryside of East Sussex (a novelty for someone who studied in London!)

I invited my friend, a new hiker, to come along with me. As we were setting off, he was adamant that I take numerous photos of him in his 'walking attire', insisting it was 'for the Instagram story', and then throughout the hike, instead of enjoying the scenery, was on his phone most of the time on social media!

Forgive me for the rather trivial anecdote, but it got me thinking about the younger generation's increasing use of social media, and just pondering how it impacts our mental health.

*According to recent statistics, internet users worldwide were spending 135 minutes per day on average on social media in 2017, compared with 90 minutes in 2012.<sup>1</sup>*

There are clearly positives that social media can bring; however, there are also some alarming drawbacks with regards to mental health. My view is that these negative impacts should

be explored more, with regards to the extent of the problems, and how we can tackle them.

*A survey of 1000 young people in March 2018 which showed that 41% admitted that social media platforms made them feel either depressed or anxious.<sup>2</sup>*

A further US study published in 2017 showed depression and anxiety were both independently associated.<sup>3</sup>



The reason for this is multifactorial. One factor is the impact of self-esteem, or 'keeping up with the Joneses'.

*People portray a specific version of themselves by only posting what they want others to see, and thus selectively showcasing a life with all the 'ups' but no 'downs'.*

There is evidence that excessive social media use can also negatively affect sleep hygiene, which as we know, is intrinsically linked to mental health. <sup>4</sup>

*Envious or anxious traits directly before going to sleep means the brain is still highly active.*

*Furthermore, the bright light from our phone itself can suppress melatonin, a hormone that helps us to feel sleepy. <sup>5</sup>*

Lastly, cyberbullying, which can have a huge impact on mental health, is on the increase, as social media usage increases concurrently. One survey showed that half of girls in the UK are now bullied on social media; clearly a tragic statistic that must be tackled. <sup>6</sup>

Conversely, some argue that social media platforms provide an opportunity to those who struggle socially with face-to-face settings, allowing them to interact through these platforms with like-minded people.

Social media can also make it easier to connect with support groups and online communities for young people who are struggling with mental illness, especially in marginalised groups like LGBTQ

teens and those dealing with difficult home environments <sup>7</sup>.

These platforms allow a wide reach to connect with other individuals that may otherwise be difficult to identify.

*But to combat the problems in mental health from the negative side of social media, perhaps more could be done to explore these factors and subsequently, perhaps more could be done to find solutions.*



*Mark is an FY2 currently working in Conquest Hospital.*

*He grew up in London and trained at Imperial College Medical School, before undertaking his FY1 at St Peter's Hospital, Chertsey.*

*It was there that Mark did a working age adult inpatient psychiatry placement for 4 months, which made him consider a career in psychiatry.*

*In particular I have an interest in depression and anxiety disorders, and specifically how modern day social media impacts them.*

## PRISON CITY

Imagine a town where:

- 66% of residents have a diagnosis of personality disorder
- 45% are dependent on drugs
- Rates of schizophrenia are 16 times higher than the national average.

One might hope this town would be a focus of government and public attention, and that funding for mental services reflected the higher than average need.

You might even wonder if this town would be a destination for a royal visit as part of Princes Harry and William's Heads Together campaign on mental health.

Although this town doesn't exist, its population does.

*With an average monthly population of 84,674 inmates, the prison population of England and Wales is a similar size to the towns of Gosport and Redditch.*

Unfortunately, the health of prisoners does not seem to gain the attention you might hope for, or even a royal visit. To me this raises the question, if a town like Gosport had the same needs and mental health services as the prison population, would we find this situation acceptable?

*In 2016, 119 people died by suicide in prisons in England and Wales. Equivalent to a suicide rate of 141 per 100,000 people, more than 10 times higher the 2016 UK rate.*

A report by the Prisons and Probation Ombudsman (PPO) found that in almost a third of deaths by suicide, there had been no prior referral to mental health services when it was appropriate.

When 40% of prisons inspected in 2016/17 had inadequate or no training for staff in mental health, it paints a picture of a vulnerable population put at risk by organisational failures.



*If NHS services in a town like Gosport had a record like this, it would be difficult to imagine how the CQC could neglect to become involved.*

Of course, the comparison to a town isn't quite appropriate. The prison population is spread out geographically and has a high turnover of inmates, increasing the chance of prisoners falling through the gaps between different trusts, council provided services and services in privately-run prisons.



*To provide effective care, the needs of the population have to be understood.*

In a town like Gosport, data from hospital admissions, GP records and the census can help understand the nature and needs of the population local services provide for.

Sadly, the prison service lacks this data and transparency. The last major review of prisoner health was conducted in 1998 - the year of my birth, and a year when the prison population was half its current size.

The National Audit Office recently criticised the Ministry of Justice for not providing a breakdown of the £400m budget for prisoner health to show how much goes to mental health services.

Without up to date data on prisoner health, how can anyone know how much money is needed, and where it should be spent?

*The prison population is already a vulnerable group but it's being put at unnecessary risk by failings in the prison services.*

Without an intense focus on the needs of prisoners, the government will fail to live up to its talk about parity of esteem for mental health.

*Jack is a 3rd year medical student at King's College London interested in housing, transport and psychiatry.*



# Experience in Liaison Psychiatry

## Assessing a 20 year-old female post-hanging

*By Dr Samuel Jones*

My Foundation Year 1 rotation in Liaison Psychiatry confirmed my wishes to pursue a career in Psychiatry.

The variety of presentations, ranging from elderly inpatients with low mood and loneliness to acutely psychotic patients in the Emergency department kept every day interesting, and exposed me to various aspects of psychiatry that I had not previously considered.

*Amongst the many memorable and often complex patients I assessed there was one particular case that fascinated me. It is one that provoked detailed reflection and the learning points it highlighted will be revisited throughout my career.*

Claire is a 20 year-old female who has been living in England for the past 6 months.

She lived with her boyfriend, Tim and worked in a local bar. She had experienced anxiety as a college student surrounding the completed suicide of her brother by hanging two years previously.

Other than this, her psychiatric history was negligible.

Claire was not known to any mental health services. She denied any childhood or school life issues and described close relationships with her family, friends and boyfriend. She drank alcohol at weekends with friends, occasionally taken in combination with other substances such as cocaine and ecstasy. She denied any drug or alcohol dependence.

*On the early hours of a Sunday morning Claire attempted suicide by hanging herself from the roof of her friend's balcony using some washing line.*

She had last been seen 30 minutes prior to this so the amount of time hanging was unclear. She was unresponsive and had no pulse when found by her friend, Gary, who immediately called emergency services and performed basic life support.

Fortunately, she responded to treatment and the paramedics managed to obtain return of spontaneous circulation. She spent the next 5 days on the Intensive care unit under sedation.

Once extubated, the clinicians were pleased with her neurological outcome and referred her to the Psychiatric Liaison Team.

The initial assessment with Claire was predominantly an informal chat about what had happened and attempting to identify any triggers.

*She had no memory at all of hanging herself or her stay in Intensive care.*

She appeared shocked when informed what had happened but overall her mood appeared to be euthymic and reactive with no concerns with her thoughts or perception identified.

*We saw Claire multiple times over the coming week and continued to find her regretful, insightful and with no further suicidal ideation.*

A cognitive screening tool identified deficits in attention, memory and fluency but these were improving by the time of discharge. I also had the opportunity to speak to Claire's mother and father, Tim and Gary. Each of them lost for words with how unexpected this was.

*I had found it deeply shocking to see this young girl who had so very nearly succeeded in taking her own life.*

Even Claire herself appeared to have difficulty in comprehending the magnitude of what she had done. She was extremely fortunate to be alive; being found any later would have significantly reduced her chances of survival and caused inevitable brain damage.

The opportunity to converse with a patient who had 'lived to tell the tale' was both humbling and fascinating. I began to reflect upon the overall assessment of Claire and

attempted to consider what could be learned from her case.

Individuals who have completed suicide are often not known to mental health services. To the lay person, it is unlikely that Claire would be somebody considered at high risk of taking her own life. There are components to her history that can help to understand how this happened.

*The first, and probably most obvious, is her family history; the suicide of her older brother. It is well reported that suicide risk is increased in those who have family members who have taken their own lives.*

Following discussion with Claire and her family the question emerged as to whether she had extensively grieved the loss of her brother.

She has undertaken the supportive role in the family and only when moving to England had thoughts and grief surrounding his death re-emerged.

*Claire's father also discussed Claire's impulsive tendencies. He described her moving to England appeared to be somewhat of a 'snap' decision. Analysing this with Claire she agreed and admitted feeling isolated in England and missed her family.*

Claire's close friend, Gary, expressed concerns about her relationship with Tim. He said that they often had explosive arguments. The most



recent, two days before the eventful night, had led to them separating.

*Gary considered her relationship breakdown to be a significant factor in her decision making and became frustrated when Claire could not recall the argument and Tim denied it ever happened.*

He was also concerned that alcohol and drug use had exacerbated her thoughts; he admitted that Claire had been drinking very heavily and taking cocaine with him over the weekend.

*I will recall the risk factors identified from Claire's case throughout my future practice.* Pattern recognition is essential in identifying a patient who is riskier than they may initially appear.

This cohort of patients may be particularly difficult to manage due to their impulsivity and lack of help seeking behaviour, day to day they may not even possess a recognizable psychiatric disorder.

Services are available that may have greatly benefitted Claire and prevented such a devastating incident occurring.

Early recognition of a risky individual and involvement in services may help to disrupt the downwards spiral seen in this case and may help to prevent the unnecessary loss of life.

*Dr Samuel Jones*

*Foundation Year 2*

*Sunderland Royal Hospital*

*Supervisor: Vishaal Goel*

# A Gap in Care

*By Dr Mary Broughton*

My first placement in my foundation years was with the Old Age Psychiatry service. I saw a case which demonstrated the need for forward planning and adequate end of life training for staff working in the department.

A lady with severe dementia lost the ability to swallow foods or liquid. Mrs J had been on the psychiatric ward for several months due to extreme agitation and distress, with long screaming episodes that did not respond well to medication.

*She had been deteriorating; nearing the end of her life.*

Many of the nursing staff were very keen to continue looking after Mrs J, having known her for a long period.

A syringe driver was delivered to the ward, and a nurse from the local hospice came on a Friday afternoon to briefly instruct the ward nurses on its use.

*Unfortunately, there was no out of hours support available. This meant that they did not feel comfortable administering end of life care, having not received full training.*

This meant that the patient had to be transferred to one of the main hospital wards. This decision was difficult for the whole team, as well as Mrs J's family, who were very

happy up until this point with the way she had been looked after on the psychiatry ward.

Moving the patient at this late stage of her disease caused the patient unnecessary distress and was upsetting for the family. There was a sense of outrage among the team who felt that we were letting her down.

*Many palliative patients can be cared for at home, so why could Mrs J not be cared for in a familiar environment by people that know her?*

Mrs J was moved to one of the medical geriatrics wards. This meant that the experienced medical nurses caring for her were able to manage her palliative care more confidently.

Unfortunately, her long and disruptive screaming episodes meant that she was a complex patient. The staff on the psychiatric ward were accustomed to this and were skilled at comforting Mrs J, backed up by their mental health expertise.

*Although Mrs J's physical health was being managed, her personal and emotional needs, and those of her family were not being met.*

A DNA-CPR had been put into place, and the family were aware that Mrs J was near the end of her life. Unfortunately, the specialist palliative care service were only contacted when Mrs J had lost her

swallow, meaning that arranging the delivery of subcutaneous medications was time critical.

*This experience has taught me to always look ahead, and to consider end of life needs sensitively and pragmatically.*

Even though this had been done in part, the full practicalities of the situation had not been explored resulting in an unsatisfactory outcome for the family.

Clearly, there is a need for an outreach palliative care service that can support psychiatric wards, or perhaps for palliative care training to be delivered to mental health staff working in Older Persons Psychiatry.

Perhaps earlier planning for this situation could have helped.

The wards care for a frail and elderly population, so it is likely that some patients may come towards the end of their life there.

*Staff in Old Age Psychiatry need training in the use of syringe drivers, and there needs to be 24 hour support from specialist palliative care nurses in order to prevent patients having to be moved at crisis point when they are very unwell.*

*Dr Mary Broughton,  
FY2, North-East England*



# Treating the spectrum of normal?

## Reviewing oxytocin therapy in ASD patients

*By Lucy Whittaker*

Autism spectrum disorder (ASD) is a neurodevelopmental condition characterised by impairments in social interactions and communication, with limited range of activities of interest.

Currently there are no pharmacological treatments available for alleviating the core characteristics of ASD.

*The most promising target, pharmaceutically, for treating these core traits is the neuropeptide oxytocin, or the “cuddle drug”.*

A wealth of research has shown oxytocin levels are known to increase in response to social bonding and have anti-anxiety properties, which would aid the core traits of ASD.

The early stages of the research on non-human mammalian animal studies, illustrated the significance of oxytocin on many aspects of social behaviour including social recognition, memory and forming of attachments <sup>(1,2)</sup>.

*Genetically, four single nucleotide polymorphisms (SNPs) associated with ASD showed correlational relationship with oxytocin receptor gene across Caucasian, Japanese and Chinese Han populations <sup>(3,4)</sup>.*

Children diagnosed with ASD having lower blood levels of oxytocin with a higher concentration of oxytocin precursors, compared to neurotypically aged matched children <sup>(5,6)</sup>.

*So, could oxytocin therapy for ASD be viewed as simply correcting a biochemical imbalance?*

Prior to studies involving an ASD sample, the effects of oxytocin were measured in a neurotypical population.

Collating study results, a meta-analysis of neuroimaging taken after oxytocin administration showed strong effects on the left insula, which plays a role in social cognition.

Task specific effects were reported on the caudate and putamen (during social learning tasks), and the temporal lobes, amygdala, prefrontal and anterior cingulate cortex (during social stimuli and face processing).

Regarding core ASD traits, within neurotypicals, improvement were seen in; affective voice recognition, increase in eye gaze/ contact, emotional recognition and interoceptive awareness <sup>(7,8)</sup>.

*Focusing on an ASD population, even from single dose intranasal administration improvements have been seen in core ASD traits from higher order social cognition, to physiological responses to affective sounds<sup>(9-11)</sup>. Long term therapy has shown sustained social improvements<sup>(12)</sup>.*

Despite an abundance of supporting evidence, the main criticism vocalised by NICE for not recommending oxytocin therapy is the insufficient sample size in studies, reflecting the difficulties of recruiting from this population.

Analysing this from an ethical approach, the following questions can be raised; as ASD is a spectrum disorder, and the entire population can exhibit ASD traits without a diagnosis, is it moral to 'treat' only a selected proportion of the population?

Moreover, if ASD is just a part of the wider spectrum of normal, why should it need to be treated, is it not just then a socially constructed concept?

However, a recent meta-analysis of the use of oxytocin nasal spray in psychiatric disorders revealed ASD was the candidate psychiatric disorder with the most potential to benefit<sup>(13)</sup>.

With the proper guidance on application and licensing, oxytocin therapy could aid those with ASD, improving patients' ability to

communicate and interact with the world around them, whilst maintaining the unique way in which they interpret it.

*Lucy is current fourth year medical student with a psychological medicine intercalation. She has always had an interest in neurodevelopmental conditions, especially ASD, and is a keen baker and trekker in her free time.*



# Dissecting the mind:

Reflections on a summer research project

*By Anastasia Mirza-Davies*

With my second year of medical school completed and the expanse of student holidays ahead of me, I decided to apply for a summer research project within Cardiff's Division of Neurosciences.

Previously, I had enjoyed unearthing the current research on psychiatric disorders alongside the intellectual challenge of understanding neurodegenerative disease as part of a mental health case.

Therefore, I was delighted when offered a project with Dr Judith Harrison to help with Diffusion Tensor Imaging tractography.

## Diffusion Tensor Imaging

Diffusion in the grey matter tissue is free to move in all directions.

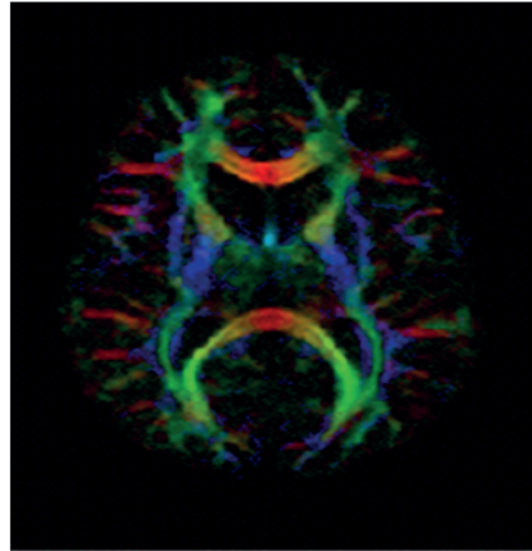
Due to the myelin sheath, diffusion along axons is restricted to one direction

We can assume that the direction of diffusion in axons is equal to the orientation of white matter fibre tracts

The MRI signal is sensitised to the diffusion of water molecules along axons  
dMRI therefore produces a diffusion tensor (see Figure 1), a 3D map fibre orientations.

The diffusion tensor is used in tractography to create virtual dissections of white matter tracts (Figure 2).

*Diffusion Tensor Imaging or DTI tractography is an exciting neuroimaging technique used increasingly by neuroscientists to dissect the architecture of white matter tracts in vivo<sup>1</sup>.*



*Figure 1: Showing a Diffusion Tensor. It is colour coded to show the principal direction of white matter tracts. Red represents left to right, blue shows cranial to caudal and green depicts tracts running anterior to posterior.*

By tracing the diffusion of water molecules along axons in the brain, DTI is able to draw a 3D map charting the direction of white matter fibre tracts.

This 'map' is colour coded to show the principal direction of each fibre bundle, with hues indicating where this principal direction shift (see Figure 1).

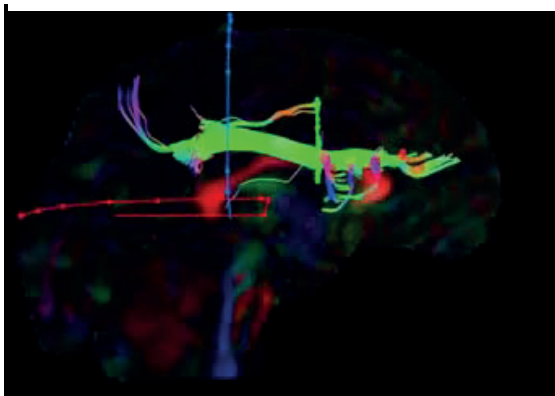
By applying the information obtained in DTI to the tractography software, ExploreDTI<sup>2</sup>, it is possible to virtually reconstruct the trajectories of white matter tracts in the brain (see Figure 2).

Over the course of the summer, I was tasked with using tractography to map the 3 branches of the superior longitudinal fasciculus (SLF); a bundle of association fibres in each cerebral hemisphere thought to be involved in important cognitive processes such as attention, memory and language. At first I found the project somewhat overwhelming as I had

not previously heard of DTI or tractography, let alone used the software.

Nonetheless, with guidance from my supervisor and a thorough search through the current medical literature, I quickly grasped the concepts of this MR technique and marvelled at how I was able to use tractography to observe the brain's neuroanatomy.

*Figure 2: Showing a reconstruction of the SLF 3 using tractography. Data courtesy of the University Medical Centre Utrecht ExploreDTI Workshop.*



I also developed invaluable skills including critical appraisal of medical literature, academic writing and practical experience of tractography software.

*Albeit there are still many challenges facing the anatomical accuracy of tractography<sup>3</sup>, my summer project has taught me the importance of neuroimaging in aiding our understanding of psychiatric disease.*

White matter makes up 50% of the brain<sup>3</sup>, yet it is still poorly understood, particularly as research is often constrained to post-mortem dissection.

*Technology such as DTI could offer the opportunity for researchers to evaluate higher functions implicated in psychiatric disease, such as cognition and emotion, in living patients.*

As an example of this, DTI tractography has been used to identify hemispheric lateralisation of visuospatial attention<sup>3</sup> and

has generated much interest around the field of neurodevelopment.

Now, having completed my project, I will head back to third year with a new appreciation for academic research, as well as a flourishing interest in neuropsychiatric disease.



*Anastasia is a 3rd year medical student currently studying at Cardiff University.*

*She is particularly interested in the pathophysiology behind neuropsychiatric diseases and passionate about widening medical student's participation in research.*

*Anastasia also serves as a committee member for the Cardiff University Research Society this year. Outside of medicine she enjoys dancing salsa, ice skating and learning foreign languages.*



# Long-lasting neurotoxic sequela of lithium toxicity

## A case study

*By Dr Maria Vittoria Capanna*

### AIMS

Long-lasting cerebellar symptoms and syndrome of irreversible lithium-effectuated neurotoxicity (SILENT) are rare but important sequelae of lithium toxicity which impact patient's morbidity and quality of life.

Delay in diagnosis raises many topics of discussion, which are explored in this piece.

### HYPOTHESIS

*Lithium induced toxicity can cause neurotoxicity with long-lasting symptoms.*

Increased awareness of rarer side effects associated with lithium toxicity could help increase monitoring, especially in high risk groups.

For example, in older patients, age-related changes to pharmacokinetics increase the likelihood of toxicity.

### BACKGROUND

*Lithium has a broad side-effect profile; one of the more serious side-effects is dose-dependent encephalopathy.*

Symptoms are usually reversible, however, more rarely, these don't subside and cerebellar syndrome persists.

Long-lasting cerebellar syndrome has been recognized as an uncommon, but potentially irreversible consequence of lithium therapy.

Despite this, it has remained the mainstay of treatment of mania since first used in 1949. Persistent neurological sequelae of lithium toxicity remain rare, with only 90 cases reported between 1964 and 2004.

*We present a case of a 62-year-old lady with suspected long-lasting cerebellar syndrome on a background of schizoaffective disorder.*

### METHODS

A 62-year-old lady presented with Parkinsonian symptoms:

- Bilateral hand tremor
- Monotonous speech
- Hypomimia
- Bradykinesia
- Functional and cognitive decline

5 months after an episode of lithium toxicity (initial level 3.30mmol/L).

Confusion screen was negative, AMTS: 8/10, ACEIII: 57/100 and poor performance in frontal lobe assessments.

### *RESULTS*

The long-standing Parkinsonian symptoms and cognitive decline despite discontinuation of lithium therapy and lack of alternative cause of confusion resulted in a postulated diagnosis of long-standing cerebellar syndrome and SILENT.

Risperidone was weaned and home care was supported by a four times a day package of care. There was also community psychiatric input.

### *CONCLUSIONS*

Whilst long-lasting cerebellar syndrome is uncommon, the repercussions on mental and physical health can be severe. This case reiterates the importance of patient education and monitoring, especially in patients stratified at higher risk of toxicity.

*Furthermore; when assessing cognition and cognitive decline, implementing tests such as the CNSVS could be instrumental in maximising accurate patient cognitive function and avoiding false positive results that occur as a limitation of the current cognitive tests.*

Finally, lithium's neurotoxic side-effects are mostly reversible on cessation. Does lithium's effectiveness, outweigh the possible

reversible short-term side effects and rare risk of long-term sequelae of toxicity?



*Dr Maria Vittoria is a foundation year two doctor in North West Thames Deanery. She has always been interested in psychiatry from medical school and has sought out opportunities outside the curriculum to explore this field further.*

*Maria has been involved in research regarding sleep and its effects on mood and risk taking as well as an interest in sleep in autistic children. She has also been part of research into bariatric psychiatry.*

*Maria is currently preparing for her exam for entry into psychiatry core training and taking part in quality improvement in psychiatry in her current trust.*

## Crisis Assessment and Intervention for Adolescents in Northern Ireland

### A Case Study

*Crisis Assessment and Intervention for Adolescents* was a three-week SSC module with the aim of providing two medical students with an understanding of the formation and function of Community Assessment Mental Health Service (CAMHS) within Northern Ireland's only Child and Adolescent inpatient unit.

Truthfully, child and adolescent psychiatry has been the single facet of psychiatry that I have almost subconsciously avoided. The use of pharmacological treatments in young individuals has for many years sparked profound discomfort in myself. I anticipated that acquiring a deeper insight into the role of a psychiatrist working with children and adolescents would challenge these pre-held views.

The use of biological interventions, although still present in the treatment of symptom management, forms a significantly minor fraction of a patient's care plan. In stark contrast to adult psychiatry, it was apparent that despite the wide diversity of available psychiatric drugs, in reality, very few hold a place within child and adolescent psychiatry.

*Rather the interaction of biological, psychological and social factors when assessing and treating a young person's mental health difficulties holds fundamental importance within CAMHS.*

Psychiatrists may use specialised assessment tools, such as the Functional Analysis of Care Environments, in aggregation to history taking and patient assessment but these should never be diagnostic.

*Like a cardiologist uses their stethoscope, a patient's history and mental health assessment is a psychiatrist's examination tool.*

Emergency psychiatry resonates as my most interesting teaching within the SSC. Deliberate self-harm, overdose and suicidal ideations are areas of mental health that health professionals across medical fields find challenging to deal with.

*For some physicians, the concept of deliberating suicide and related behaviours with suicidal patients and heightening suicidal ideation or increasing symptoms presents a catch-22 situation. In March 2017, following the release of the 2017 Netflix series 13 reasons why this theme was highly fostered by the media, with accusations of glamorising and sensationalising suicide.*

Evidence would suggest, however, that acknowledging and talking about suicide may in fact reduce

patient suicidal ideation rather than increase it (Dazzi et al., 2014).

It stands to reason, it is necessary to reflect upon the emotional impact that working with children and adolescents with mental illness may have upon health professional's wellbeing. The concepts of transference and countertransference are vital and clinicians should remain aware of these when interacting with patients; having the knowledge that one own's anxious emotions may heighten a patient's anxiety (McAuley, 2003).

Understanding the former concepts, the psychiatric case report posed the most challenging aspect of the placement. Despite my previous experience and placements within adult psychiatry I was unprepared for the emotional strain this young patient's history of trauma would have upon me. I found it difficult not to think about what the patient had told me when I was at home that evening. I have come to learn that psychiatry training is also distinct from other specialities as training doctors are able to attend weekly Balint groups to discuss cases which they may have found difficult psychologically and emotionally. I have not come across this provision within other medical specialties and I believe that this is a truly unique aspect of psychiatry, which places a medical professional's wellbeing at the forefront.

On self-reflection, I have gleaned that if I hold resilient views on a particular area of medicine it is far better to gain experience within the said field in order to formulate new, more positive views so that I become a better, well-rounded clinician. The past three weeks were truly a unique experience and I have achieved many new skills, foremost, the communication skills I have gained will be timeless, and carry forward in my medical career.



*Patricia Vincenzo is a third year medical student at Queen's University Belfast. Patricia holds an undergraduate degree in Psychology and enjoys volunteering for SWOTup, a charity based and medical student led society aimed at widening access to medical school. In her spare time, she enjoys hiking, drawing and reading dystopian epic fantasy novels.*

# Working in Psychiatry

## The importance of a safe space for self-reflection

*Dr Bharat Velani*

Mid-way through my rotation as a Foundation doctor in Psychiatry, I found myself having a difficult time on the wards. For a few weeks, there had been several patients who did not believe they needed to be on the ward and were unhappy about receiving pharmacological therapy.

They were difficult to manage and often used abusive and aggressive language. At times, I was attacked personally.

*It came to a point where I was not enjoying my work, and this was having an effect on my life at home and my personal relationships.*

Initially, I found it difficult to talk about this with my friends and family. Not because the people around me are not supportive or empathetic, but because my emotions were quite overwhelming.

*Did this mean that I was a bad communicator? Was I doing an injustice to my patients? Should I be considering a career in Psychiatry?*

My feelings were alleviated by bringing the case to our weekly Balint group. The group allowed me to organize my thoughts and feelings and after this, I found it

easier to discuss what was happening at work with the people who were close to me.

I want to share a reflection that I wrote after bringing my case to the group. I hoped that it would give an idea of how Balint groups can help in processing and dealing with things that you are finding difficult.

*“The most difficult thing that I have found is that most patients who are acutely unwell lack insight.*

*This often means that they do not believe that they are suffering from a mental illness, do not want any treatment and do not want to be an inpatient on the ward.*

*Depending on the personality of the person and presentation of the illness, this can be a very challenging situation to manage. Having to constantly try and persuade people that you are trying to help them can be a thankless task and can make your practice feel unrewarding.*

*As you can imagine, being kept somewhere, by law, against your will, is likely to make anyone feel frustrated, upset and powerless.*



*These emotions are often projected onto the medical and nursing staff.*

*When people are suffering and feel powerless it is often a natural response to make the people around you feel your suffering too. Especially if they are seen to be the cause of your predicament.*

*Your ability as a doctor is questioned, you are attacked on a personal level and you are forced to question things that are core to your identity, such as your compassion and humanity.*

*Situations can sometimes culminate in unavoidable violence, but this is almost an easier thing to handle. At least you know what to do and how to act.”*

*The action that you take is often guided by protocol and can be easier to justify to yourself.*

*Seeing more inward suffering in patients and having to feel the full force of their emotional outpourings is what I found took a more prolonged emotional toll on me.”*

Throughout the placement, the Balint groups have been a fantastic forum to talk about challenges faced on the ward. The format allows not just an “unloading” of emotion, but

also an opportunity to form new ways of thinking about things that stay with you.

An ability to see things from an alternative angle and understand things at a different depth helps process your thoughts. Bringing meaning to the emotions that you are experiencing helps make things more tangible and accessible.

It is from this platform that your thoughts and feelings can be expressed to the people around you and can form a part of your existing identity, rather than being at odds with it.



*Bharat Velani is a Foundation Year One doctor in Psychiatry at Essex Partnership University Trust. At times, he has found managing patient behaviour very challenging.*

*He found weekly Balint groups were a fantastic setting to talk about and process some of the challenges he believed all people that work in mental health can relate to.*

*Bharat hopes that it can help others working in mental health appreciate the benefits of reflection in a safe space.*

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*Guy was the Royal College of Psychiatrists 'Trainer of the year' in 2013.*